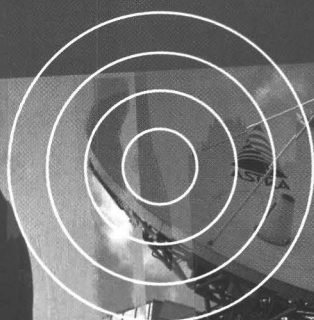


S I G M A

The bulletin of European statistics

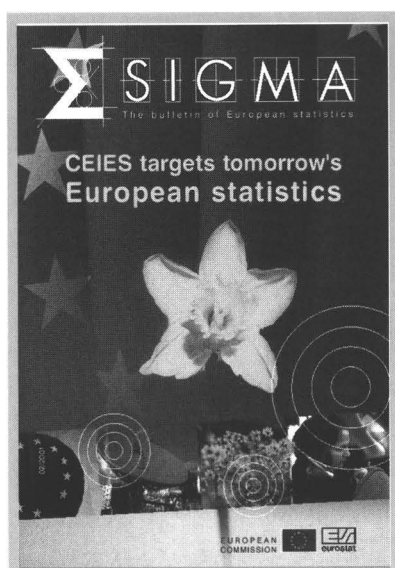
CEIES targets tomorrow's European statistics



OSCE: 26

EUROPEAN
COMMISSION





Sigma – the bulletin of European statistics produced in Luxembourg by Eurostat

Chief editor

Amador Rodriguez Prieto

Assistant chief editor

Fons Theis

Editorial team

Barbara Jakob, François Vermeulen,
Glen Campbell

Assistant

Virginie Schultz

Layout

Claudia Daman

Cover

Frédéric Guyon

Published by

Office for Official Publications of the
European Communities

Catalogue number

KS-AB-01-002-EN-C

© European Communities, 2001

Printed in Luxembourg

Views expressed in *Sigma* are those
of the authors, not necessarily those of
the European Commission

Sigma is available free of charge
from:

Eurostat

Press & Communication Team

Bech A4/20

L-2920 Luxembourg

Fax: +352 4301 35349

e-mail: eurostat-pressoffice@cec.eu.int

In this issue of Sigma...

More than just a think-tank, the CEIES – the European Advisory Committee on Statistical Information in the Economic and Social Spheres – brings together statisticians and users of statistics, and has been an indisputable key player in helping to develop Community statistics since 1991.

On the occasion of its 10th anniversary, the CEIES held a conference in Brussels on 26 and 27 April this year pointing the spotlight on a number of pressing topics for European statistics. *Sigma* wants to share the fruits of the conference with readers.

In the following pages, you will learn more about:

- the CEIES – its role, its achievements and its challenges...
- the highlights of the CEIES decennial conference,
- some of the main challenges for European statistics in the years to come, and
- the perspectives of both the producers and users of statistics.

Introducing the CEIES, **Joachim Lamel**, CEIES Vice-Chairman, highlights its role as mediator between statistical producers and users. **Alain Chantraine**, former Eurostat Director, gives his perspective as someone who was responsible for Eurostat's relations with the CEIES throughout its decade-long existence. And *Sigma* recapitulates **Pedro Solbes'** opening remarks at the conference on current EU policies and their statistical impact.

To help guide your reading, we present the various papers or extracts of papers delivered at the conference around four main themes: **Enlargement and Deepening**, the **Information Society**, **Social Exclusion and Social Cohesion** and, finally, **Sustainable Development**. Each theme is briefly introduced by the chairpersons of the CEIES subcommittees.

On Enlargement and Deepening, **Eneko Landaburu**, Director-General of the Commission's DG Enlargement gives an update on the headway made in the enlargement negotiations of the Candidate Countries.

Speaking of the Information Society, Deutsche Bank's **Norbert Walter**, Chief Economist, presents the challenges raised by the New Economy.

Turning to Social Exclusion and Social Cohesion, **Roger Jowell** and **Carli Lessof** of the UK National Centre for Social Research describe the stumbling blocks in measuring social exclusion.

Finally, on Sustainable Development, the Chairman of Italy's Senate Environment Committee, **Fausto Giovanelli**, sketches out a blueprint for an environmental accounting system.

Also in this issue...

We learn more about Germany's statistical set-up. **Pia Brugger**, from the Federal Statistical Office, presents how the Statistical Advisory Committee fits into the system. **Reiner Stäglin**, Chairman of the German Statistical Society, a scientific forum for exchanging and improving know-how, calls for greater public awareness about statistics.

For the *Sigma Profile*, Barbara Jakob travelled to the European Economic Area's smallest country to meet **Christian Brunhart** to find out about Liechtenstein's statistical system.

Agneta Thermaenius, from Statistics Sweden, recounts how Sweden has introduced a Gender Equality Index.

Germany's Federal Statistical Office has been assessing its work processes as part of a quality offensive, as **Thomas Körner** explains.

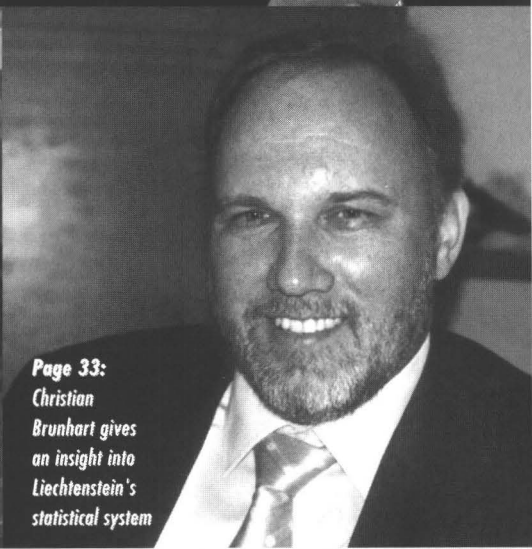
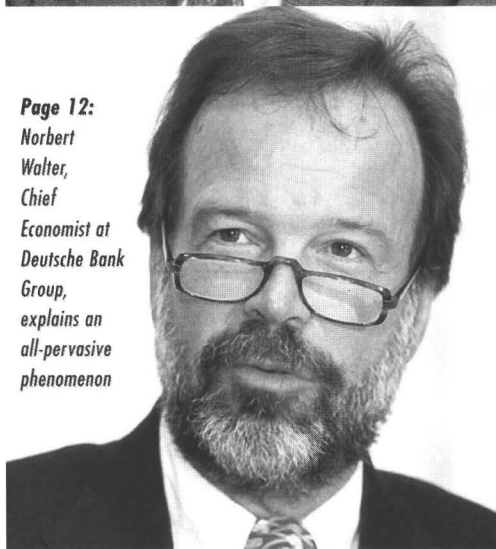
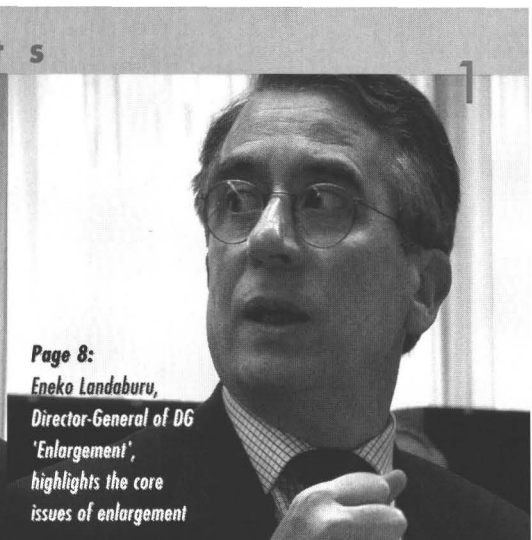
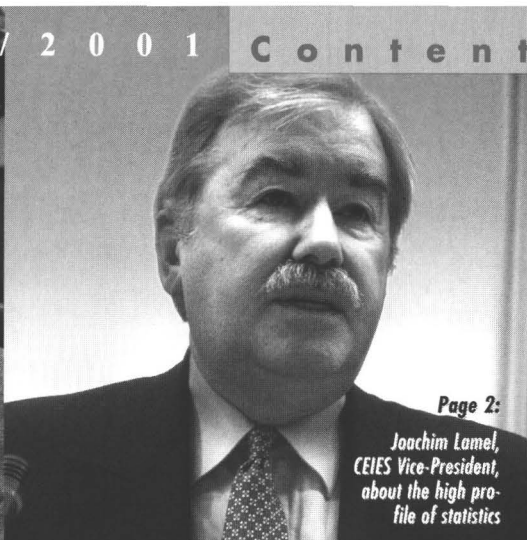
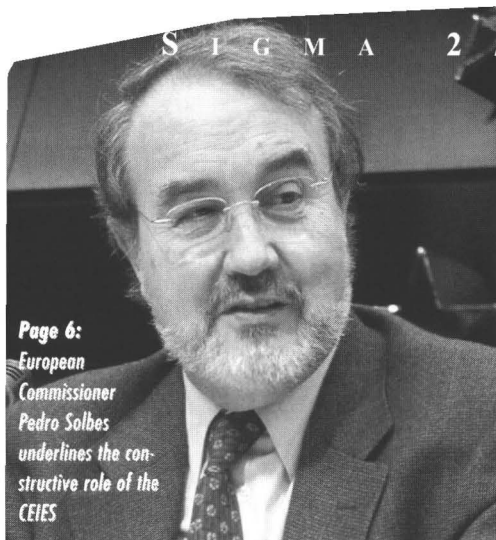
Following new statistics legislation in Malta, **Robert Mizzi** of the Maltese Central Statistics Office tells us about their major revamp.

We wind up the issue with **Luigi Biggeri**, recently appointed President at the helm of Italy's ISTAT, and with Eurostat's **David Heath** who, after 27 years of loyal service, retires at 65 ...

Fons Theis
Assistant chief editor

We would like to **thank** all those who have contributed to this edition:

Christian Avérous, Wolfgang Bartels, Pia Brugger, Christian Brunhart, Alain Chantraine, Cristiana Conti, Angela Dale, Jean-Christophe Le Duigou, Luigi Frey, Patrick Geary, Fausto Giovanelli, György Granasztói, Ullrich Heilemann, Roger Jowell, Doris Kubicek, Thomas Körner, Joachim Lamel, Eneko Landaburu, Carli Lessof, Claudia Lohkamp, Robert Mizzi, Martin Schüler, Karen Siune, Jerzy Skuratowicz, Reiner Stäglin, Ineke Stoop, Risto Suominen, Agneta Thermaenius, Norbert Walter, not forgetting Josée Nollen, Nicole Lauwerijs and Deborah Evans of the CEIES secretariat and, of course, all 'our correspondents' in Member States.



SIGMA COMMENT

CEIES – feeling the pulse of society 2
by Joachim Lamel, CEIES Vice-President

SIGMA THEME

CEIES TARGETS TOMORROW'S EUROPEAN STATISTICS – THE COMMITTEE'S DECENNIAL CONFERENCE

Linking society and statistics 4
Alain Chantaine, former Eurostat Director, takes stock of the past ten years

An active and dynamic forum 6
European Commissioner Pedro Solbes opens the conference

Eneko Landaburu, Director-General of DG 'Enlargement', approaches the theme **'ENLARGEMENT AND DEEPENING'**
Twofold challenge for Community statistics 7

Norbert Walter, Chief Economist at Deutsche Bank Group, draws a picture of the **'INFORMATION SOCIETY'**
The New Economy questions traditional concepts 12

'SUSTAINABLE DEVELOPMENT' made to measure 17

An approach by Senator Fausto Giovanelli, Chairman of Italy's Senate Environment Committee

Roger Jowell and Carli Lessof of the UK National Centre for Social Research undertake ...

A Europe-wide hunt for elusive measurements 'SOCIAL EXCLUSION/ SOCIAL COHESION' 22

Towards up-to-date, independent and self-confident statistics 26

Fons Theis draws the conclusions of the conference

FOCUS ON MEMBER STATES

An active role in formulating statistics 29

Pia Brugger of the Federal Statistical Office on Germany's Statistical Advisory Committee

The link between producers and users of official statistics 30

Chairman Reiner Stöglin introduces the German Statistical Society

A statistical excursion to Liechtenstein 33

Sigma's Barbara Jakob profiles statistics in the EEA's smallest Member State

Who's washing the dishes now? 37

Agneta Thermaenius presents Statistics Sweden's Gender Equality Index

Process analysis as a tool to optimise organisation 39

Thomas Körner describes the German Federal Statistical Office's 'quality offensive'

Maltese Statistics gets far more than a facelift 41

Robert Mizzi examines the implications of a new law

Istat welcomes a new President 43

FOCUS ON EUROSTAT

A statistician with green fingers 44

David Heath retires from Eurostat

European Commission Delegation

Library

2300 M Street, NW

Washington, DC 20037

AUG 21 2001

OSCE: 26



feeling the pulse of society

Although there are no statistics on jokes about statistics and statisticians, experience suggests that there is no shortage of them. Only what is of genuine concern to society – whether positively or negatively – achieves this sort of high profile. Clearly, society acknowledges that it obtains information via statistics – information that would not exist without them.

Every democratic society needs information to be able to describe its condition and the changes that occur in it, and statistics make a considerable contribution to this. Besides portraying the situation of society, particularly in the economic and social fields, statistical information helps political and economic decision-makers to obtain a rational view of projects and plans. And lastly, the general public and the media need statistical data to be able to assess the results of political decisions.

This is just as true at supra-national as at national level.

Political developments such as the Single Market and Economic and Monetary Union have given additional impetus to the need for sta-

"Challenges for Community statistics - A user's perspective for the next ten years"

For its conference to mark its tenth anniversary, the CEIES chose four topics with major implications for the future:

- enlargement and deepening,
- the information society,
- social exclusion and social cohesion, and
- sustainable development.

The unabridged conference papers are available at:

<http://forum.europa.eu.int/Public/irc/dsis/ceies/library>

The following pages give an account of the conference's highlights.

tistical information at European level.

It was the former President of the Commission, Jacques Delors, who ultimately provided the incentive to involve the European public in the development of European statistics by setting up an advisory committee consisting of representatives of society.

The mouthpiece of society

The European Advisory Committee on Statistical Information in the Economic and Social Spheres (CEIES) was set up in 1991. It sees itself as representing users and respondents at European level. In order to represent the European public across the board, the CEIES is made up of representatives of industry, employees, science, the media and consumers.

Once a year, in a plenary session, it discusses opinions on matters of European statistics, which are then forwarded to the European Parliament, the Council, the Commission and the National Statistical Institutes. These opinions are based on proposals drawn up in subcommittees and seminars.

Four subcommittees have so far been set up:

- The subcommittee on social statistics will in the near future deal with statistics on health and safety at work and the measurement of lifelong learning.
- The subcommittee on economic and financial statistics deals with questions of the service society, particu-

larly the New Economy and its measurement.

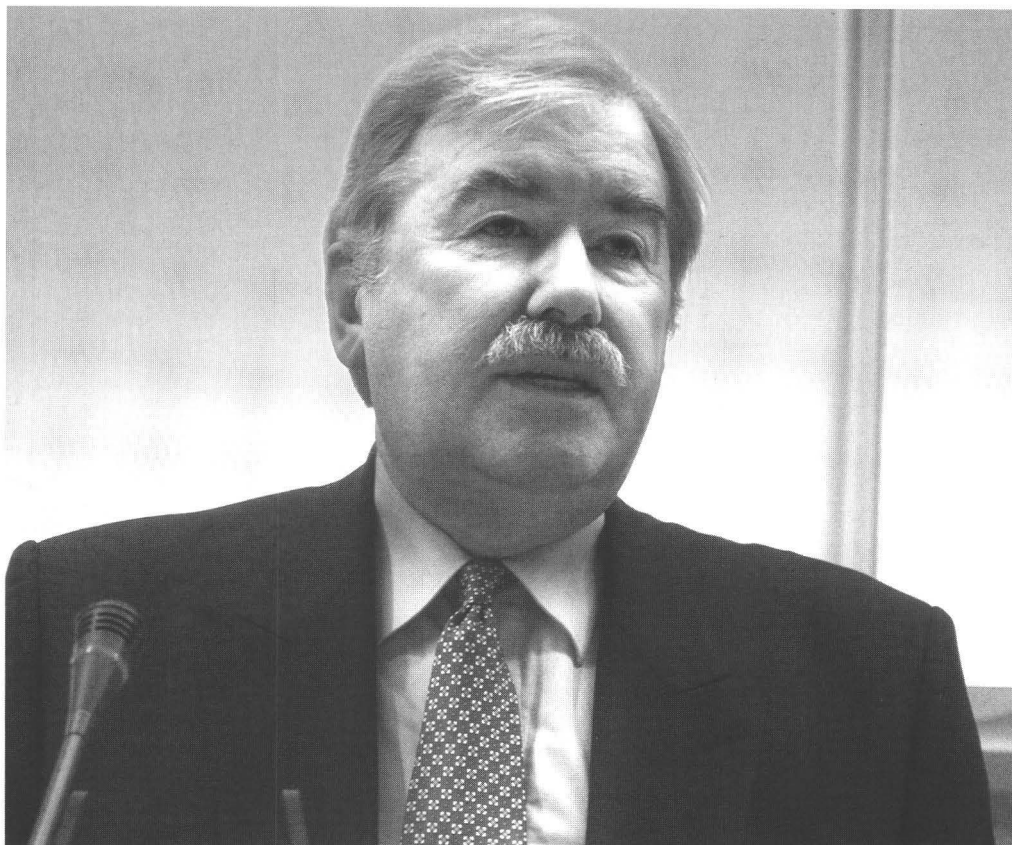
- Another subcommittee deals with policy on the publication of European statistics, not only from a technical perspective but also from the users' point of view, particularly with regard to conditions of delivery and confidentiality.
- A fourth subcommittee deals with the Harmonised Consumer Price Index from the point of view of its acceptance by the European public.

A fruitful exchange of ideas

Seminars are generally held on the topics currently dealt with. Seminars are also planned on agricultural statistics, information for consumers and indicators for measuring innovations in the field of research and technology.

The seminars have the main advantage of involving, in addition to the members of the CEIES, wider circles of users and respondents in the discussion and thereby bringing these matters closer to the citizens. These seminars, which are often organised jointly with Eurostat, are also always attended by Eurostat representatives competent in the particular field, thus ensuring a direct exchange of ideas from which both sides benefit.

Like any newly founded institution, the CEIES initially had to struggle for recognition and acceptance. In the meantime, however, it has emerged that Eurostat is the main beneficiary of CEIES opinions and



Statistics as a public asset

The CEIES regards statistics as part of the basic infrastructure of a modern society and thus access to statistical data as a public asset. Consequently, basic data should be freely available. Eurostat should work with the Member States to maximise the volume of data that can be made available.

This has been put into practice in Austria, for example, where there is an obligation to publish data fully and free of charge on the Internet. Maximum quality, which in this case includes free access to basic data, is precisely what should ultimately set the European Statistical System clearly apart from other providers.

Europe's statisticians should make a pact with the citizens of Europe: the citizens give the statistical system directly or indirectly the information which it cannot otherwise obtain, in exchange for which the statistical system grants the citizens access to all results so that they can form an idea of the condition of society. Both will benefit from this deal, and any strategy should seek to bring about this state of affairs, in which everyone is a winner. The CEIES will continue to make its contribution to this end in the future. ■

Joachim Lamel

Executive Secretary of the
'Industry' section, Austrian
Federal Economic Chamber
and Vice-Chairman
of the CEIES

recommendations. CEIES opinions are increasingly incorporated into Eurostat's statistical programmes, and the CEIES will soon be dealing with the new five-year statistical programme for 2003 to 2007.

Ten years ago the newly founded CEIES faced the challenges of the Single Market and Economic and Monetary Union. Today the CEIES has to face new challenges, so on its tenth anniversary it is not looking to the past but is dealing with the challenges of the future. The enlargement and deepening of the European Union and problems of social cohesion, social exclusion and sustainable development are the central topics of the conference on *"Challenges for Community statistics – A user's perspective for the next ten years"*.

Since enlargement and deepening involve the integration

of the statistical systems of the new members and/or new demands resulting from the much greater cooperation in the field of economic policy, particularly involving Monetary Union and the European Central Bank (ECB), systems of indicators are required to describe social phenomena like exclusion or cohesion and to measure sustainable development.

Besides the tasks imposed on it by the political system, the information society poses a double challenge for statistics: new plans must be devised for the satisfactory recording of statistics on the information society itself. An even greater challenge, however, is posed by modern communication technologies in their own right. Very fast information transmission means that people expect statistical information to be supplied on a real-time basis and do not allow for the special circumstances

and conditions in which official statistics are compiled.

The CEIES regards a strategy for the future of the European Statistical System mainly as providing statistical information of the highest quality as quickly and as cheaply as possible and as making all the people of Europe aware of the direct and indirect benefit of statistical information. Respondents, as those who are required to provide data, are an integrating component in this connection.

Full advantage should be taken of all available technical facilities in conducting surveys, processing data and publishing results in order to meet the demand for rapid provision of statistical data. In almost all its recommendations the CEIES also deals with the costs of statistical information, whether incurred by respondents or, above all, by users.

With ten years of work behind the European Advisory Committee on Statistical Information in the Economic and Social Spheres (CEIES), it was time to take stock of its achievements. In the following article, *Sigma* summarises the speech by **ALAIN CHANTRAINE**, former Eurostat Director now retired, who was in charge of relations between Eurostat and the CEIES throughout this time.

Linking society and statistics

The CEIES officially came into existence in 1991, but its origins really go back two years earlier. Speaking at a seminar on the European statistical information system after the introduction of the single market in 1992, Jacques Delors, who was the President of the Commission at the time, called for a committee to be set up with the primary tasks of "heeding requirements, seeking simplicity and defining long-term priorities for the Community statistical system".

The challenge of getting started

At that time, achieving the single market was the over-riding concern in Europe. Statisticians were thinking about their role in this venture, which was already a first step towards Economic and Monetary Union. There were also other factors – such as incorporating the idea of Europe into statistical output, controlling costs while resources stayed unchanged, gradually introducing information technologies and bringing statistical information to new users beyond the traditional

customer base of the State and researchers – which meant that Mr Delors' suggestion quickly became reality.

At a time when the production and dissemination of reliable and indisputable data, that met the needs of society as a whole rather than solely the requirements of the State, became the task of the statistical institutes, the creation of the CEIES made it possible to include official statistics in the democratic debate. The membership of the CEIES in fact reflects this aim, since representatives of European society sit alongside national and Community statisticians and Commission officials. Ten years on, what conclusions can we draw?

In spite of a slow start, the CEIES has now found its place in the Community statistical set-up. The determination of a few people, and especially of the three successive vice-chairmen, has borne fruit. The structure of the Committee has been streamlined. In order to provide a better response to specific needs, four sectoral sub-committees were set up, and their work is publicised by organising sem-

inars in the various EU Member States. The four sub-committees cover economic and monetary statistics, social statistics, the harmonised consumer price index (HCPI) and dissemination policy.

An evolving structure

Although the emphasis in the last ten years has focused primarily on social statistics, the work of the various sub-committees shows that the other sectors have not been neglected. In any case, this division into sub-committees is not written in stone and can change according to the needs and expectations of the CEIES members. For instance, the dissemination sub-committee was set up recently, while the HICP sub-committee started off as a simple study group, and another sub-committee – on innovation – was recently disbanded.

The work of the CEIES and its sub-committees does not only involve holding seminars and publishing the proceedings but also produces opinions addressed to the Council and to the Commission and, on an

informal basis, to the European Parliament. These opinions are not binding and cover the relevance of the Community statistical programme, monitoring the programme and the costs borne by the European Union, National Statistical Institutes and information providers in connection with the production of statistics.

Impact of the CEIES

The opinions of the CEIES provide a link between the Community statistical programme and the overall needs of society in Europe. For instance, the Committee's opinion was fully incorporated when the Community statistical programme for 1998-2002 was drawn up, and the results of this year's seminar will have an immediate impact on the preparation of the statistical programme for 2003-2007.

As for the seminars, they are followed by the publication of proceedings that are real works of reference thanks to the quality of the papers they contain. The CEIES is thus now a full partner in compiling the Community statistical

programme, thereby fulfilling to a large extent its original task.

This is clearly shown by the involvement of various spheres of European society in the work of the CEIES and by the regard that is given to their concerns. Relations between the media and the statistical institutes have been given a great deal of attention, especially with regard to access to information and its dissemination.

The representatives of undertakings have played a very important role on the Committee, both for business statistics and for general economic statistics. It should be remembered that the first work of the Committee, in 1993 and 1994, dealt with the effects of the single market on businesses in Europe. But it was in connection with the economic and social partners that the biggest efforts were made.

At the macroeconomic level, the introduction of the euro is undoubtedly the key event of the decade. In view of the fact that statisticians had to perform at such an intense pace, the CEIES was unable to be directly involved in the work on the convergence criteria. The Committee has nevertheless been helping since 1993 to devise the harmonised consumer price index, and recently it was given the job of monitoring the index.

The Committee has given a lot of thought to the future of statistics on foreign direct investment in the wake of the loss of information sources in connection with the introduction of the euro and in response to the economic operators' requirements in terms of short-

term indicators in the Economic and Monetary Union.

One of the main contributions of the CEIES has been in the field of social statistics, however. The social statistics programme, employment statistics, labour costs, working time and part-time work, income distribution, training and social exclusion are all subjects that the CEIES has focused on.

What will the future bring?

There is still progress to be made, especially with regard to certain audiences such as researchers. These people want to have access to the data they need for their research work. Progress in this area has been merely notional with the adoption of the regulation on statistical confidentiality and the "statistical law". Concrete applications are still in the future.

At a more basic level, the CEIES could be given an institutional boost. There are several ideas for this.

In view of the discussion that has been going on at the Commission about European governance, the role of a committee such as the CEIES ought to be redefined, with the idea of arranging more structured links with the legislative institutions. In this connection, an effort should be made to strengthen the links with the European Parliament, which at the moment does not have the benefit of obtaining the Committee's opinions directly. This is a major point, especially since the introduc-



tion of co-decision to the statistical domain.

At the moment, the Commission is free to consider the purely advisory opinions of the Committee. One idea might be to go farther than just issuing an opinion and to have a hearing on some matters before the relevant parliamentary committee or the Presidency of the Council.

The CEIES is keen for those producing statistics to be involved in its work. However, the Committee needs to ensure that it retains its independence from producers so that it does not lose credibility.

A stronger position also depends on ensuring better control of resources. Hitherto,

the Committee has relied totally on Eurostat and a number of National Statistical Institutes. It would not only become more independent but would also gain institutional recognition and substance if it were given resources directly from the Commission budget.

These three inter-connected suggestions would help the Committee to perform better in carrying out its fundamental job. ■

1. Since the start of 1997 a "fundamental European law on statistics", Council Regulation (EC) No 322/97 of 17 February 1997 has served as an overall legal act to define the fundamental conditions and general provisions and procedures for official statistics in Europe.



The European Advisory Committee on Statistical Information in the Economic and Social Spheres has existed for ten years. When it was set up by the Council in February 1991, the aim was to provide a single forum where representatives of European society and statisticians could exchange views on Community statistics.

More specifically, the task of the CEIES is *"to assist the Council and the Commission in the coordination of the objectives of the Community's statistical information policy, taking into account user requirements and the costs borne by the information producers"* (Article 1 of the Council Decision of 25 February 1991).

The membership of the Committee reflects this desire to involve everyone with an interest in statistics. Each Member State sends two delegates from the economic, social or scientific spheres (34 in all), and the heads or Directors-General of the National Statistical Institutes (18) are also represented, as well as the Committee on Monetary, Financial and Balance-of-Payments Statistics (CMFB), which sends its chairman. The Chairman of the CEIES is the Member of the Commission responsible for statistics, Pedro Solbes; he is also a member of the Committee, as are three Directors-General of the Commission.

Day-to-day business is the responsibility of the vice-chairman, Joachim Lamel, and the chairmen of the sub-committees, together with Eurostat, who together make up the "Bureau". Eurostat provides the secretariat of the Bureau and the Committee.

An active and dynamic forum

In his opening address CEIES chairman **PEDRO SOLBES**, European Commissioner for Economic and Monetary Affairs including statistics, stressed the significant and constructive role of the Committee in the framework of the European Statistical System. He underlined that over the past ten years the CEIES has proven to be an active and dynamic forum for debate on Community statistics reflecting the opinion of the European society at large. *Sigma* recapitulates Pedro Solbes' statements on current political activities at EU level and their impact on statistics.

The process of European integration is in full swing, and as a consequence, the statistical requirements for relevant, reliable, comparable and timely statistical information are virtually growing in parallel with the implementation and execution of new European policies.

Among the main political projects also leading to enormous and urgent statistical challenges, I would like to mention just three: EMU, the Lisbon-process and enlargement.

EMU statistical requirements

Despite the great efforts already undertaken at all levels within the European Statistical System in recent years, European macroeconomic statistics have to improve further. With Economic and Monetary Union the need for reliable and timely European statistics has become increasingly pressing; this is most obvious for the European Central Bank.

European monetary policy needs an accurate picture of

the economic situation in the euro-area. Also, the surveillance of national economic policy – with the help of the stability and convergence programmes – depends on the quality of the available statistics.

But financial markets and international business obviously have statistical needs too. The economic situation in the EU has to be compared with developments in the United States and Japan to guide investment decisions.

Looking back, statistical information at European level for key areas to be monitored such as labour markets, public finance, short-term indicators and international transactions did not meet the same quality standards as those available at national level for most EU countries.

As a consequence, and taking critical assessment reports from the Economic and Financial Committee on the state of macro-economic statistics into consideration, we

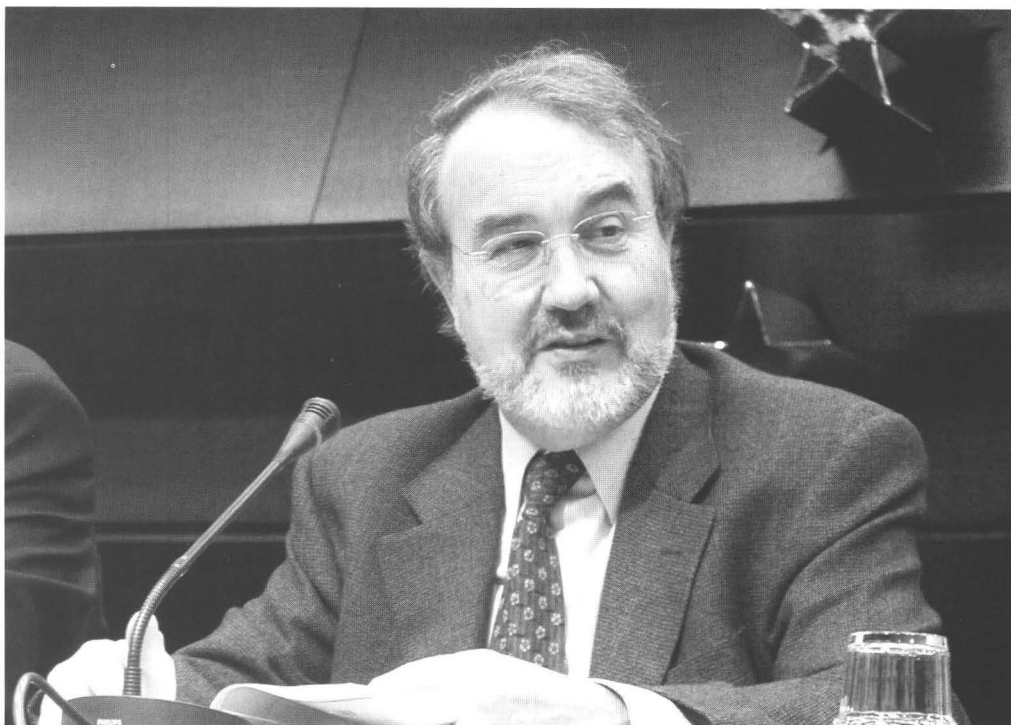
proposed a statistical EMU Action Plan.

This action plan was adopted by the Ecofin Council in September 2000. On the basis of this plan, the National Statistical Offices and Eurostat are now requested to fill vital statistical gaps within a specified timeframe.

As far as I can see, the action plan has been favourably received by the National Statistical Institutes. It strengthens their priorities and provides a political lever for adequate resources for statistics at national level.

Lisbon process

At the Lisbon Special European Council in March 2000, the Union set itself the "strategic goal for the next decade: to become the most competitive and dynamic knowledge-based economy in the world capable of sustainable and economic growth with more and better jobs and greater social cohesion."



The Council acknowledged the need to regularly discuss and assess progress made in achieving this goal on the basis of commonly agreed structural indicators. To this end, it invited "... the Commission to draw up an annual synthesis report on the basis of structural indicators to be agreed relating to employment, innovation, economic reform and social cohesion."

The first Synthesis report was published by the Commission in February this year. The Commission's Directorate-General 'Economy and Finance' has co-ordinated the preparation and Eurostat has been closely involved. The current state of the structural indicators can be consulted on the Eurostat website (<http://europa.eu.int/comm/eurostat/>).

An evaluation of the first exercise of this kind shows, however, that serious difficulties for the selection, definition and collection of the relevant list of indicators had to be overcome. Eventually, this was only possible through

very constructive cooperation within the Commission and with our partners in the European Statistical System.

Regardless of this positive experience during the first exercise, a host of serious problems is likely to persist: harmonisation of the indicators has to be improved between EU countries and, in particular, with those of the US and Japan, and coherence and consistency has to be enhanced between the different areas covered. Also, some indicators have to be adapted or even still developed. For the next report early next year we are endeavouring to involve the National Statistical Institutes, our main partners in the European Statistical System, as early and as much as possible.

Enlargement process

The break-up of the Soviet Union and the end of the cold war have profoundly altered the existing geopolitical order. Against this new backdrop, the process of enlargement to include Central and Eastern

Europe, Cyprus, Malta and Turkey represents a historical undertaking for the European Union. It is a political need and an economic opportunity too. Enlargement will have an enormous impact on EU policy in the coming years.

The importance of high quality, comparable statistics for the Candidate Countries was recognised very early. The availability of quality statistics is vital for the functioning of a decentralised market economy and the harmonious development of a democratic society. It is also crucial for feeding the negotiations between the EU and the Candidate Countries with relevant and reliable information. Right from the start of the rapprochement with our new partners, it was understood that statistics, as developed within the EU and required by all EU countries, will be part of the "acquis communautaire".

In close cooperation with the National Statistical Institutes and financed by the Phare Programme of the European Union, Eurostat has extensively supported the development

of the statistical systems in the Candidate Countries. Nevertheless, most of the credit for the positive development has to be given to the statistical authorities in the Candidate Countries themselves.

Indeed, both the quality and availability of Candidate Countries' statistics have been increasing enormously in recent years and Eurostat will progressively integrate them within the European Statistical System.

So far there has been no major criticism from the side of the accession-negotiators with regard to the supporting statistical information. Some problems, however, might emerge when the chapters concerning the Structural Funds, environment and agriculture are negotiated because, in those areas, the statistical requirements are very detailed and EU-specific.

Future challenges

These are only a few of the projects with significant implications for the future. I am therefore pleased that three of those further-reaching themes, the *Information Society*, *Social Exclusion/Social Cohesion* and *Sustainable Development*, in addition to *Enlargement and Deepening* are at the centre of the CEIES decennial conference.

Clearly, statistics can play a vital role in helping to prepare the right answers for the future challenges of the Union. For my part, I assure you of my full personal support and the close cooperation of my services so that you can continue to play an essential role for the development of European statistics. ■

Enlargement and Deepening

An introduction by Patrick Geary

In its ten-year history, the CEIES has only once experienced an enlargement of the European Union, with the accession of Austria, Finland and Sweden. The enlargement process now underway is far more complex and has completely different dimensions, with the number of member countries possibly doubling in the next few years. More importantly, given their backgrounds, the Candidate Countries have far greater adjustments to make to qualify for membership. This is as true in the field of statistics as in many other fields.

It is therefore appropriate that in its decennial conference, the CEIES should address the issues of enlargement and deepening, both because of its role as an advisory committee on economic and social statistics and because enlargement and deepening will probably have a major impact on the evolution of the CEIES itself.

The statistical implications of enlargement for the former socialist countries of Central and Eastern Europe are apparent. For example, major conceptual changes are required in the key area of national accounts; reliable GDP data are central to many aspects of EU policy formulation and to its budgetary system.

The requirement to provide more, better, reliable and

timely statistics will place new burdens not only on National Statistical Institutes in these countries, but also on data providers, such as the newly established business enterprises.

One question is whether all the Candidate Countries can swiftly meet the demands made on existing members of the EU; the implications for resources could prove to be a real obstacle. If not, how can we moderate the demands without unduly compromising the quality of the data provided? Areas such as the level of aggregation, frequency and the census-versus-survey issue may provide opportunities, enabling a more manageable transition period to be available to the countries needing it.

The three papers presented to the Conference deal with different aspects of the challenges posed by enlargement and deepening. *Eneko Landaburu* provides a summary of the process of enlargement from the perspective of the European Commission. With the statistics chapter provisionally closed for the twelve countries actively negotiating for EU membership, he outlines the progress made on the detailed aspects regarding the provision of statistics. As the paper makes clear, however, much remains to be done.



Risto Suominen writes from the dual perspective of a data provider and user. He stresses the challenges facing the Candidate Countries in meeting the requirements of EU membership. He also addresses the issue of deepening and the significant implications for statistics - standardisation, reliability and timeliness - which are already matters of priority and have become especially urgent with the single currency.

György Granasztói gives a historian's view on the enlargement process and the subsequent statistical demands from a Hungarian perspective. Among the issues he raises are differences between large and small countries, the possibility of a multi-tier Europe and a centre-periphery divide.

Patrick T. Geary is Professor of Economics at the National University of Ireland, Maynooth. He is CEIES member since 1991 and chairs the CEIES sub-committee on dissemination policy.

The aim of enlargement policy was to bring several countries into the European Union, many of which had been under an authoritarian regime. Not only was the political mindset in these countries far removed from ideas in countries based on a market economy, but their level of economic development was also fairly low.

It was for this reason that the European Council meeting in Copenhagen in June 1993 had to lay down precise accession criteria:

- ▷ a political criterion on the stability of institutions guaranteeing democracy, the rule of law, defence of human rights and respect for minorities;
- ▷ an economic criterion involving the implementation of a functioning market economy and the capacity to cope with competition within an integrated economic area;
- ▷ a criterion based on compliance with the *acquis*

ENEKO LANDABURU, Director-General of DG

'Enlargement' at the European Commission, highlights in this article the vital importance of collecting statistical data for the EU's enlargement policy. Before reviewing the progress of work in this area, he outlines the current situation concerning negotiations with the Candidate Countries.

Twofold challenge for Community statistics

communautaire, with 80 000 pages of legislation to be incorporated into national systems.

To these could be added a fourth criterion: the administrative capacity of a Candidate Country to implement the *acquis communautaire*.

Update on negotiations

Talks now seem to be speeding up. In January 2001, discussion of the 29 negotiation chapters began with the first six Candidate Countries. Deliberation of a large number of chapters with the other six Candidate Countries also started under the Portuguese, French and Swedish presidencies. Several chapters between 6 and 18 have already been provisionally closed both with the first six candidates and the others.

This also applies to the 'statistics' chapter. The 'easiest' chapters were the first to be provisionally closed, but a few others that were more complex – such as those cov-



Thirteen countries are seeking to join the European Union. Negotiations started with six of them – Cyprus, the Czech Republic, Estonia, Hungary, Poland and Slovenia – following the European Council meeting that was held in Luxembourg in December 1997.

In February 2000, following the European Council meeting in Helsinki, negotiations were started with six other Candidate Countries: Bulgaria, Latvia, Lithuania, Malta, Romania and Slovakia. At the same time, Turkey was officially recognised as a Candidate Country.

all the Candidate Countries should be in a position to have incorporated the whole of the *acquis communautaire* in this area by the time they join.

Balancing political will and capacity for reform

A feature of the approach to the negotiations is the balance between political will and capacity for reform. While there can be no negotiation on the principles underlying the *acquis communautaire*, there is some leeway when it comes to how it is applied. The main idea is to see with each Candidate Country whether the timing of the adoption and implementation of the *acquis communautaire* can be staggered without jeopardising the internal market or distorting competition. This brings us to the question of the transition periods. There is also something else, equally vital, at stake: the ability to make credible commitments and to stick to them.

ering the free movement of goods, company law and customs union – were also closed. In addition, we have also completed the preliminary work to pinpoint prob-

lem areas in order to prepare for the talks on requests for transition periods. Overall, the work of statistical harmonisation is advancing fairly satisfactorily, and virtually

Widening and deepening

Risto Suominen, *Director of the Federation of Finnish Enterprises*



Statistical information is at the core of the enlargement process for several reasons. First and foremost is the need to avail of a reliable measure to assess the state of development in the Candidate Countries and their convergence with EU Member States. The use of this measure as the basis for decisions on EU budget contributions and financial transfers between EU Member Countries is equally important.

Risto Suominen points out that the next waves of enlargement are unique because it will be the first time that

former socialist countries join the Community. This requires comparatively more efforts from Candidate Countries in terms of adapting their statistical systems than in any other previous enlargement.

From the perspective of someone representing the business world, he calls for more exhaustive and more accurate statistical information that would help managers to decide where to establish a business. However, he regards dissemination and ease of access to statistics, as well as their availability in English, as equally important.

Suominen also underlines that EU Member States successively entering the EMU constitutes a second type of enlargement that will cause discontinuity in euro-zone statistics.

Finally, he emphasises that deeper cooperation between EU Member States – the most obvious manifestation of which is the single European currency, the euro – also has profound consequences on statistical information needs, primarily in terms of reliability and timeliness which he regards as among the major issues for policy-makers and businesses alike.

As guardian of the Treaties, the Commission will have to ensure that these commitments are complied with. If this is to happen, 'society' will have to endorse the decisions that are taken by the governments of the Candidate Countries.

Nice Council guidelines

With the end of the Intergovernmental Conference and the approval of the strategy put forward by the Commission, the European Council in Nice marks a new stage in the enlargement process.

The strategy proposed by the Commission continues to be based on two principles: catching up and differentiating. The countries with which negotiations started in 2000 have a chance to catch up. The differentiation principle means that the progress made by each candidate will depend on its own merits

and its ability to comply with the accession criteria.

The new element is the adoption of a 'road map', i.e. an 18-month timetable with three six-monthly stages, at the end of which the Union undertakes to have drawn up common positions on the chapters in question. More specifically, these common positions will rule on the requests for transition periods, deciding whether they are acceptable, negotiable or unacceptable.

This commitment on the part of the Union means that it should be possible by the end of 2002 to conclude negotiations with the countries that are best prepared and which meet the criteria. The European Council has also expressed the hope that these new Member States will be in a position to take part in the next elections to the European Parliament.

Enlargement statistics

What progress has been made with regard to the collection of statistical data?

The former accounting system in the countries with state-run economies was based largely on the idea of 'net material product'. Although this system provided a fairly good picture of what was happening in state-owned undertakings, it only skimmed over the role of services in the economy, with the result that there were major distortions.

A gradual process has been introduced since then, whereby each stage of closer alignment with the EU involved jointly agreed reform projects.

The statistical systems of the Central and Eastern European countries (CEECs) have thus undergone rapid change. In a different context, Cyprus, Malta and now Turkey have also begun to adapt to the

new standards of European national accounts.

This process of change speeded up between 1993 and 1998, with the establishment of purchasing power parities (PPPs) for the Candidate Countries and clearer definitions of the ideas involved.

DG 'Enlargement' – a consumer of statistics

Statistics are at the hub of enlargement policy issues. The reason is that the debate on the development gaps, as expressed in terms of PPPs, between the Candidate Countries and the EU Member States is a recurring topic. And also because accurate information on regional GDP expressed in PPPs will be vital for access to the Structural Funds when the new countries join.

Lastly, it is because the diagnoses made in the regular reports depend to a very



Eneko Landaburu, Director-General
of DG 'Enlargement'

large extent on statistical information. It is the Eurostat data that count, even if there are occasional problems concerning, for instance, agricultural statistics, foreign direct investment, up-to-date macroeconomic data and bilateral trade balances. Eurostat is in fact putting in a lot of data comparison work in preparing the annexes to these regular reports.

Still some way to go

The *acquis communautaire* is being adopted, but there is still some way to go. For example, the collection and harmonisation of data are not yet satisfactory where government financial accounts are concerned.

Collaboration between Eurostat and the statistical offices of the Candidate Countries

plays a key role in the adoption of the *acquis communautaire*. The national offices are in fact the main providers of the data that Eurostat makes comparable.

The Phare Programme has also played an essential part in the assistance that has been provided to the national offices and in funding some of the adjustments.

We need to continue with our efforts so that each Candidate Country can comply as far as possible with the requirements for joining the EU and even start thinking beyond that moment. The fact is that, with joining the euro-zone in mind, even more sophisticated series of indicators will be needed. ■



The nation and the future of Europe

György Granasztói, Director of the Teleki Laszló Research Institute, Hungary

European integration is a process, which is striking a particular resonance on the other side of the former Iron Curtain. At a time when the nations of Central and Eastern Europe are regaining their national sovereignty and experiencing the negotiated exercise of power, and are also rediscovering, therefore, the dynamics of relations between civil society and the State, the enlargement of the Union and the construction of Europe raise certain essential questions, apparently more acutely here than elsewhere.

György Granasztói, Director of the Teleki Laszló Research Institute specialised in international relations and Central Europe, brings to the debate a historical perspective steeped in politi-

cal philosophy. According to him, "the future of Europe will be played out in the context of a reciprocal relationship between the development of the nation, of civil society and the emergence of the new, 'flexible' man", as a kind of economic necessity in the light of the rapid changes in the labour market.

Enlargement and integration therefore go hand in hand because, interwoven with questions about the political maturity and compatibility of the new candidates and about the implications of farther-reaching institutional reforms, there is the question of the future of the Union.

It is a future which gives rise to certain misgivings, as the possible develop-

ments involve risks. A multi-speed Europe could make second-class partners of these new arrivals, while a Europe that is more confederal and more open to the classical interplay of the balance of forces would decrease the small countries' influence. Lastly, a supranational Europe, leading to the creation of a centre and a periphery, would also present dangers in the eyes of the Candidate Countries.

The dilemma between the nation state and the supranational structure is not likely to be resolved by subsuming one into the other. Instead, we need to rise above the centre-periphery dichotomy and create a link between the sharing of a common identity and belonging to a nation.

Information Society

An introduction by Karen Siune

The CEIES regards mediating the demands of different types of users as one of its major tasks. Therefore, with the information society bringing about new needs for statistical users, the CEIES is taking the opportunity to raise – and hopefully answer – some of the most important questions linked to the statistical aspect of the information society:

- How does the information society challenge European statistics?
- How far are we into the information society?
- And finally, what indicators do we want?

In an advanced democratic society like the European Union, one of our main expectations is that we can obtain any information we want in an information society; we expect information to flow freely.

Indeed, technological development has made us no longer accept technical excuses. This also applies to Eurostat and the National Statistical Offices which are facing an ever-growing demand for easy and rapid access to an increasing amount of statistical information. Dissemination – part and parcel of the Information Society – is thus an important topic for Eurostat, European statistics and for the CEIES.

As for statistical indicators, a number of them have been developed over the last 10 to 15 years. But because the information society is still under development, there is a growing need for more and better figures. Looking ahead, discussion on new indicators for the information society and the New Economy will certainly continue, providing the focus for further work and seminars within the CEIES. ■

Karen Siune is Director of the Danish Institute for Studies in Research and Research Policy. She now chairs the CEIES sub-committee on the Harmonised Index of Consumer Prices (HICP) after being Vice-President of the CEIES from 1993 to 1999. Karen Siune holds a doctorate in political science and has been professor at the University of Aarhus.



The USA has experienced the longest stretch of economic growth with low inflation since the end of the war. In the last five years, the US economy grew at an average annual rate of about 4.5% in real terms, and even in 2000 at a rate of 5%. The unemployment rate fell in the same period by almost two percentage points to under 4%. Inflation remained low – despite an increase in oil prices by over 20 US Dollars per barrel within the last two years.

The New Economy is one, very plausible explanation for this phenomenon of an expanding economy and simultaneously low inflation. Growing liberalisation and globalisation are other factors contributing to this extraordinary performance by the US economy. Nevertheless, trend growth is apparently higher in the New Economy, owing mainly to an increase in productivity, especially in the information and communications technology (ICT) sector.

An all-pervasive phenomenon

The New Economy is not only a technological issue; it is a revolution changing the way we live. And it is not confined to a single sector, but concerns every aspect of society. The main feature of the New Economy is the increasing influence of ICT on the organisation of life in general and business in particular. It is everywhere, and is most apparent in the rapid increase in start-ups as well as in the structure of firms, which is becoming less hierarchical and more horizontal.

The world has become a global village. Owing to information and communications technology, countries, companies and individuals at the geographical periphery are no longer relegated to the sidelines. They have already become leaders in some fields, as can be seen in the case of the northern European countries. Also, groups in society that up until now could only participate in a limited way, such

The very specific features of the New Economy have called traditional economic concepts into question – says Prof.

NORBERT WALTER, Chief Economist at Deutsche Bank Group. Conventional statistical approaches tend to capture the changing economic realities too late and usually inappropriately. Many open questions that need to be answered if statistics are to reliably evaluate the phenomenon of the New Economy...

The New Economy questions traditional concepts

as the disabled people, now take an active part thanks to developments such as telework. In addition, e-business has been increasing and is expected to grow further.

A head start for the US

In most aspects of the New Economy the US is ahead of Europe as attested by the higher per capita investment in modern technologies and a larger share of ICT in gross domestic product (GDP).

The reasons for this head start in ICT are obvious. The US has a stronger entrepreneurial culture, the Americans being generally less risk averse than the Europeans. Additionally, the US is able to attract the brains of the world, resulting in a young, mobile and relatively highly-qualified labour force. On top of that, a more efficient regulatory system and lower taxation have promoted an outstanding equity culture, and increased the supply of venture capital for innovative ideas.



Europe catching up

But Europe is catching up in ICT. Especially northern Europe: Ireland, the UK and the Scandinavian countries have even outstripped the USA in some areas. In the field of m-commerce, Europe is already taking the lead, particularly because it established international standards for mobile phones (GSM and now UMTS).

In order to assess the implications of the New Economy, we need to understand what it basically represents and to develop ways of measuring its different aspects. But there are still deficits on both counts. Concentrating on the ICT sector is simply not enough. To draw policy conclusions, a fuller understanding of the phenomenon is needed. Logically, any effect will be connected with changes in

input of labour and/or capital, and/or productivity changes that affect both mobile and reproducible production factors.

Doing away with borders

In the New Economy the boundaries between working time, leisure, and learning time vanish. When mobile phones and the Internet become irreplaceable working tools, defining working hours properly is nearly impossible.

Since the Internet overcomes national boundaries, the distinction between national and international becomes blurred and statistical definitions based on it lose relevance. In the field of employment, for instance, how do you measure full-time equivalent or working hours in specific sectors such as software development when shortages of engineers in one part of the world can be solved in another part. The same holds true for call centres.

These developments may also partially explain why the non-accelerating inflation rate of unemployment (Nairu)¹ in the US has declined from a good 6% to probably somewhere between 4% and 5%. Hooking up with software engineers in Mexico, India and China, US growth was able to continue without inflation even after unemployment dropped well below the previously assumed Nairu level of 6%.

Food for thought

Another problem is that not even all firms in the ICT sector are registered. The share of the hidden economy in this sector is probably quite high. So how can employment be recorded correctly? And how can one measure the hours worked by a single employee in the average start-up company, where people do not come to the office at 9 a.m. and leave at 6 p.m.? Labour input is thus not captured adequately.

In addition, there is the problem of measuring capital input, since there is no clear-cut definition of ICT investment. Investment in hardware is definitely input, but how should software be treated? As a consequence, productivity – as the ratio of output to input – cannot be computed correctly.

So far, national statistical offices, especially those in Europe, gather data on the New Economy inadequately. The European Commission's report on the EU Economy in 2000, for instance, quotes a private enterprise, when it refers to the share of value added to GDP in the overall ICT sector.



Prof. Norbert Walter

Even if we look at e-business alone, measurement problems persist. At present, goods and services sold on the Internet are generally cheaper than on the high-street. However, only high-street prices are incorporated in the consumer price index (CPI). While this mismatch is being reduced by price transparency and competition due to the Internet, inflation measurements have been considerably too high for quite a while.

The UK is the only country that is planning to incorporate Internet prices directly into the consumer price data in the near future. Spain and the Netherlands are planning to capture on-line goods when they re-base their indices in 2002; Germany will only follow in 2003.

Few answers

Statistics on turnover via the Internet are not yet available in sufficient quantity and quality. How are gross sales and total value added measured? The official statistical institutes do not give satisfactory answers. Most data are provided by e-consultants, i.e. research firms, such as EITO (European Information Technology Observatory) or Forrester. And the figures often differ by more than the margin of error.

Investment and output data for the ICT sector are not available on a timely basis either for many countries. For most EU countries, there are no individual capital-stock series, since the statistical offices in the EU do not provide a detailed breakdown of capital and invest-

ment numbers by product and service for the ICT sector.

Then there are major difficulties in calculating depreciation, owing to the rapid technological progress that shortens the economic life of products. Estimates of capital services provided by ICT equipment are therefore highly uncertain.

Added to these comes the obvious problem of how to measure changes in productivity, where accurate price measurement is particularly important. Besides input, real output in the ICT sector may also be measured falsely, or at least, measured in different ways in different countries with only some of them adjusting for quality improvements such as the US.

Spill-over from the ICT sector?

The growth in labour productivity in the US has accelerated significantly since the middle of the nineties. It is estimated² that about 0.5 percentage points of the increase in total productivity growth can be attributed to the use of computers – which represents only a part of the New Economy.

However, looking at sectoral productivity performance, one can observe that productivity in the ICT sector has increased at impressive rates while at the same time in all the other sectors productivity growth was quite moderate and barely above the rates of the previous five years. Thus there has probably been no spill-over yet from the ICT sector to other sec-

tors, or not at least on a large scale.

The importance of prices

It is difficult to assess growth in the transformation to the New Economy. The main problem is the non-availability of identical products over time. New IT products differ substantially in quality and functionality from old products. Old products disappear shortly after a new generation is launched. The speed of microprocessors increased in the nineties by a factor of over 16 and memory capacity by more than 200. Similar trends can be seen in the market for telecommunications, eg. mobile phones³. In order to

arrive at true price changes for a product, quality improvements have to be deducted from measured prices.

US statistics reveal that between 1991 and 1999 prices for computers and peripheral devices decreased by over four-fifths. German price statistics for the same group of products – which are traded truly internationally, i.e. the law of one price applies – went down by “only” one-fifth according to a report by the Deutsche Bundesbank⁴. Such huge differences are unreal. The gulf between the measured price trends is the result of different methods of price measurement. Whereas in the US quality improvements are captured by hedonic

pricing, statistical offices in the EU assess inflation without explicit consideration of quality changes.

Hedonic pricing

Hedonic pricing uses econometric analyses to enable quality improvements to be captured by decomposing the product into its economically meaningful characteristics. Then for each characteristic the value is estimated and an implicit price is calculated. Usually the hedonic price equation for a computer contains, among other attributes, its processing power, its data storage capacity, and the presence of software as independent variables. So far in the EU, only France and Sweden use a hedonic price index for

some specific items such as microcomputers. The major divergence between prices for ICT goods in the US and Germany shows that the method of measurement is of crucial importance.

If the hedonic method is applied to German prices, the result is a decrease in ICT prices between 1991 and 1999 of about the same size as in the US (over 80%)⁵.

Investments in ICT increased in the US by an annual 40% in real terms between 1991 and 1999, compared with only 6% in Germany. Applying the hedonic price method of the US to the *(continued on page 16)*

An academic perspective on the Information Society

Prof. Angela Dale, University of Manchester, UK

Angela Dale highlights that improving access to information is one of the fundamental aims of the information society. From the perspective of an academic and social scientist, she pinpoints measures that could benefit academic research on Europe.

Dale regrets that academic access to official statistics via libraries and documentation centres has declined since paper copies are increasingly replaced by electronic data carriers. This gap needs to be filled by the means provided by the information society to ensure that the available material is fully exploited – not least because the World Wide Web is increasingly the main route used by academics looking for published statistics.

Not only should publications be released to academia via electronic libraries – access to which could be regulated by a registration system – but also academic research needs database access. Drawing on the experience of UK government statistics, she calls for unrestricted access to Eurostat databases via the Web or at least restricted access to data which are no longer of commercial value.

However, rigorous analysis and academic research go beyond published reports and data extracts and therefore require access to micro-data. This would avoid large and complex datasets like the Labour Force Survey remaining wastefully under-exploited while at the same time stimulating academic research.

Recognising the importance of confidentiality, Dale discusses several strategies to provide academia with access to micro-data such as safe settings-models, remote online analysis, access under special contracts or the UK Data Archive model – all of which would respect the confidentiality requirement.

"The increased power of PCs and the growth of inter-active analysis and model fitting, mean that researchers will expect to work in a mode where they are in direct control of their analysis. Technical developments in disclosure control combined with user registration or licensing offer some solutions to current difficulties", she concludes.





German data results in a 27.5% average annual increase. Computer investments in Germany in 1998 then amount to around 64 billion DM (1995 prices), more than twice the figure calculated without hedonic pricing. In 1999 the difference is even larger at over 170%⁴.

Adjusting computer investments by using more appropriate price deflators results in higher capital formation, and hence leads to higher GDP growth.

Looking for solutions

There is no doubt that quality improvements have to be captured when measuring inflation, but the question remains whether the hedonic method is the appropriate way.

Hedonic price measurement has some methodological problems:

► **First**, the selection of the economically meaningful characteristics is subjective.

► **Second**, the method implies that all users value the marginal quality improvements. How should quality improvements be valued that are not wanted or not used by the consumer? For example, a PC user gets a software update and then also needs a new PC just to stay compatible, but still does the same work. Or, is a mobile phone with Internet access or video games useful to the average mobile-phone user?

► **Third**, although of lesser importance, restrictions in product attributes should also be considered in the pricing formula. For exam-

ple, how is the fact captured that most IT goods cannot be repaired but instead have to be replaced by new ones?

All in all, whereas the methods used so far in Europe probably underestimate the price decline, hedonic price measurement may overestimate it to some extent.

Questioning existing concepts

Reliable data on the status and impact of the ICT sector and of the significance of the New Economy as a whole are of decisive importance for both policymakers and industry. Without adjustments for quality inflation readings may be too high and as a result monetary policy may be too restrictive, and thus hinder an increase in potential growth. At the micro level, firms need to have dependable data to

decide, for example, whether to invest or not, and this requires capacity data to be accurate rather than distorted.

The information society with its blurring national borders may even lead us further to question traditional economic concepts in which we firmly believed up to now. If, as a result of globalisation, a global labour pool is available to business through the Internet, economic concepts such as Nairu, the non-accelerating inflation rate of unemployment, will collapse. It is high time therefore to analyse the conventional statistical approaches and take up the challenge of capturing the phenomenon of the New Economy. ■

1. Nairu, the non-accelerating inflation rate of unemployment is an economic concept that presumes a trade-off relation between the objectives of price-stability and a high level of employment. Under this concept a decrease of the unemployment rate below a certain level can only be achieved at the cost of higher inflation. Nairu is the level of unemployment at which both objectives are in the equilibrium.
2. Stephen D. Oliner and Daniel E. Sichel (2000), The Resurgence of Growth in the Late 1990s: Is Information Technology the Story?, *Journal of Economic Perspectives*, Vol. 14 (4), pp 3-22.
3. OECD (2000a), *Wirtschaftsausblick* 67, Paris.
4. Deutsche Bundesbank (2000), *Monthly Report* Vol. 52 No. 8, Frankfurt.
5. OECD (2000b), *The Contribution of Information and Communication Technology to Output Growth: A Study of the G7 Countries*, Paris.

Sustainable Development

An introduction by Ullrich Heilemann

The historical roots of sustainable development reach back to the 18th century, while its current form and rationale date from the 1992 Rio Conference.

In short, the aim is to combine economic and social development – including growth! – while simultaneously protecting the environment. Without discussing the goal of sustainable development as such, the three authors approach it from different standpoints, complementing one another well by the fact that all three deal with equally important issues of substance, from the perspective of their divergent interests.

In his contribution, *Christian Avérous* (OECD) looks at the requirements linked to the goals of sustainable development at statistical level. He calls for measurements at very different levels, for the inclusion of flows and

stocks (resources, national wealth) and for the linking of indicators. If OECD demands were met, the result would be a complete overview of sustainability – at least of the status quo.

Jerzy Skuratowicz (UN Development Programme) underlines the multidimensional restructuring of society which sustainability implies. From this he deduces the need for strategic partnerships, viewing the development aid recipient countries as the driving forces.

Without saying so directly, he considers that statistical information is necessary to provide the political institutions and international organisations with key data on the progress of sustainable development at all levels. In this context, particular importance is attached to early indicators and result indicators to determine the causes of poverty and the results

achieved in the fight against it.

Fausto Giovanelli (Chairman of the Environment Committee of the Italian Senate) focuses, from a national political perspective, on politically useful and relevant data on the environment which can serve as a yardstick for measuring political acts and the results achieved.

Following a critical assessment of the instruments currently available in Italy (eg. the environmental accounts), he warns against “data graveyards” with exhaustive data on every aspect of how various activities affect the environment. Instead, he calls above all for statistical information that is easy to read and which should permit the politicians to assess sustainability in a general and local context.

The authors agree on the considerable need for statistical indicators and information and believe this altogether feasible given the scientific possibilities and the urgent nature of the problem.

The authors examine only cursorily the theoretical

difficulties involved in making long-term statements both on the three pillars of sustainable development (ecology, social/societal development and economy) and on their interdependence.

The indicators favoured in the current discussion are only partly adequate here – what is needed are scenarios in the sense of combined prognoses! From this perspective, there is a need both for substantial theoretical work and statistical efforts based on this, which, however, cannot be provided without additional resources for official statistics as well; unless that is – as the CEIES has often requested – some tasks can be eliminated. The *deus ex machina* of “efficiency gains” can only achieve so much.

However, the authors are right in agreeing that these difficulties can be overcome – given the strong political will to achieve sustainable development. ■



Ullrich Heilemann is Vice-President of the Rheinisch-Westfälische Institut für Wirtschaftsforschung (RWI) in Essen, Germany, and Professor of economics, specialising in empirical economic research, at the *Gerhard-Mercator Universität* GH Duisburg. Since 1991 he has been a member of the CEIES and is currently Chairman of the sub-committee on economic and monetary statistics.

In theory, any statistical information dealing with economic activities and social life and their relations with the environment can be useful in steering development towards sustainability. Practically speaking though, given the limitless scope of this field, statistical information on this issue must be prioritised to make it effectively usable and actually used when moving towards the broader goal of sustainability.

Priority must be given to statistical work on sustainability indicators that will incorporate an environment variable into major government procedures, thereby raising the awareness on the issue and transparency in government decision-making.

Therefore, introducing and supporting organised systems of environmental accounting at EU level and by individual Member States, regions and local authorities is not only possible, but essential. Sustainability would then be sifted into the decision-making process and its importance raised among policy-makers. The public will also be able to see how the latter respond to the issue in a transparent manner. This is, at least, the approach followed in Italy and in the parliament.

Sustainable development needs tools

The growing acceptance of sustainability around the world and the availability of a fairly good definition represent cultural milestones, but are only pointers in political terms. The way ahead still needs to be forged.

Theory, planning – or a toolbox?

This change will not happen overnight. There isn't – and

With sustainable development looming ever larger in the EU policy landscape, Senator **FAUSTO GIOVANELLI**, Chairman of Italy's Senate Environment Committee, suggests what an environmental system should look like and explains how Italy has tackled the issue.

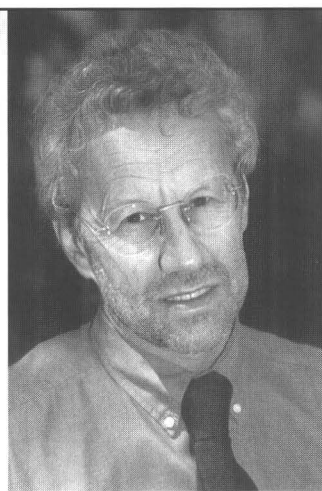
Sustainable development made to measure

there probably will never be – any model, theory or authority that will induce or lead to sustainable development. A "green GDP" is not likely to suddenly emerge to replace the gross domestic product that is used, or any worldwide sustainability plan.

No miracle will be achieved by conventional environmental legislation of the "command and control" type, which has now reached its limits when it comes to effectiveness. There are some economic instruments – ecotaxes and incentive or disincentive schemes – that may get us farther, but you need more than the power of the law to push through a complete model for patterns of living and consumption. What environmental policies need are new tools. They may not be fine-tuned yet, but that doesn't really matter as long as they are effective.

Environmental accounting: what for?

Among the tools needed to measure sustainable development, understand it and assess it, environmental accounting is high on the list. A system of environmental accounting would also ensure that decisions on sustainability are reasoned and reasonable. But what is it all about?



The purpose of environmental accounting is to measure the extent of natural resources, their flows and changes, the effects of human activity on the environment – in short, the sustainability of development over time and space. Nowadays, we can certainly monitor the excesses of society. We have a sophisticated system for measuring wealth, consumption and money flows. But is there really another set of accounts that shows the damage caused by these excesses? The time lost in traffic jams, the impact of pollution on mortality rates, the loss of sleep due to noise or stress ... Are there accounts to show how the countryside's natural beauty is being ravaged? Where do we find the figures to calculate the economic losses stemming from a natural disaster?

The income and well-being of nations

Traditional economic indicators are of little use for this task. Take GDP, for instance: if an area is hit by a disaster and the State injects massive resources to repair the damage, GDP rises. In Nigeria, GDP soared in the year when large tracts of forest were felled and sold. Municipal revenues increase if farmland is built on. These examples show that the income and well-being of a nation is not the same thing. GDP can go up while life expectancy is coming down, and while important environmental indicators show negative values.

Environmental accounts, however, provide more information so that better decisions can be made. They teach the economy that things can be worth something in the long term even when they have little value at the present time. They provide a measurement – rather than an emotional response – for the absolute and relative values of various environmental issues. They provide a place in the accounts for what economists, whether they are looking at businesses or geographical areas, like to call the "externalities" – all the effects we

are not accustomed to forecasting and calculating.

The need for real environmental accounts

Conventional policies to safeguard the environment have involved various instruments of environmental accounting in the broad sense: environmental impact assessments; strategic environmental assessments for the use of Community funds; creation of special bodies, starting with ministries, with their own budgets and action plans; development of statistics in the sector of environmental reporting; area environmental certification and efforts to apply the EMAS (eco-management and audit scheme) Regulation to actual circumstances.

Our current collection of environmental data, however detailed, cannot yet be called environmental accounting. In the sense given to it by the Rio Declaration, it should not only be an information system for environmental policies but also a widespread and composite technique that can be used as an aid for every decision in every field.

Nevertheless, it is still only a tool and must not be some authoritarian plan dictating sustainability. Nor is it an ideological or political decision for or against the environment. It is simply an information system that is effectively incorporated in the decision-making process as an antidote to the existing gaps in so many economic indicators and so many instruments of government finance and budget policies at all level.

Sustainable development and the EU

The EU's Fifth Environmental Action Programme gave formal recognition to the aim of testing environmental accounting systems by 2000. To this end, it launched various initiatives: the development of a European system of environmental pressure indices (ESEPI); the search for a system of common indicators on local sustainability; the production of a manual considering Europe's particular features; and the study and adoption of satellite environmental accounts as part of individual countries' accounts.

The Sixth Action Programme, covering 2001-2010, goes further and states that solving environmental problems requires a new innovative approach that includes mainstreaming environmental concerns into other policies and collaboration with the market and individual citizens. Involvement and proper understanding are at the basis of the political process, and it is necessary to define clear and consistent indicators, which gauge progress against identified targets, including indicators of the monetary value of the impact of environmental degradation. It also stresses that scarce resources must be channelled to obtain the priority data for preliminary and subsequent monitoring of environmental and sectoral policies.

From laboratories to institutions

Despite substantial actions at the EU level and the fact that the concept has already been broached, environmental accounting is not even at the starting line yet. One major problem is the tremendous gulf between the quantity and the quality of what is currently being compiled (identified

indicators, collected data, reporting schemes, etc.) and their actual use in the decision-making process.

There is a clear need to move beyond the vague idea of counting, measuring and giving a monetary value or indicative assessment of environmental issues. What we need is to change our perspective and move to a new phase of research in the sector. The idea is to define and introduce an environmental information system that is also useful for general economic and political decisions and can then be incorporated structurally in the fact-finding processes and the formal and informal procedures of actual decisions.

The information and data sets they contain need to become an essential component in drawing up budget documents and the procedures that are used when policy-makers and institutions adopt and approve them.

Existing environmental accounting modules and models must not simply grow within themselves. They need to be started and developed on the basis of what is required by the people using them, providing the basic information in a readily usable form, helping policy-makers to be consistent with regard to sustainability.

Italy's reaction

What environmental statistics are useful for making environmental policy decisions? In Italy, an effort was made to construct an information system, on the basis of a study by the National Economic and Labour Council (CNEL), covering all sustainability issues and offering an essential aid to policy-making on account

of its technical nature and compulsory inclusion in government budgets. It is designed to have a more definite role in the decision-making process, by clearing a way for environmental accounting in the formal procedures for budget approval by the country's elected representatives.

Following this, I tabled a first environmental accounting bill for the State, the regions and the provincial and municipal authorities, which was approved by the Italian Senate but unfortunately failed to complete its way through Parliament before the two houses were dissolved.

The bill describes the essential statistical data and information, and incorporates the information in the democratic decision-making process.

Its aim was to make it compulsory to include with the traditional economic, financial and budgeting documents other planning documents, that would be genuine environmental budgets, at every government level binding on the State, the regions and the provincial and municipal authorities. The novelty lies in the procedure chosen. The environmental budget document must be debated and voted on at the same time as the economic and financial budget, so that in considering the two documents a comparison can be made between them, and also between the economic and financial policies adopted and the related forecasts on environmental sustainability.

The various phases outlined are: the construction of environmental accounts for each level of government through-

Approaching sustainable development

Jerzy Skuratowicz, *Coordinator, United Nations Development Programme (UNDP), Regional Resource Facility, Slovakia*



The integration of sustainable development principles into development assistance programmes is at the centre of Jerzy Skuratowicz's considerations. Pointing to the example of the UN-initiated Agenda 21 programme, adopted at the 1992 UN Conference on Environment and Development in Rio de Janeiro, he discusses the challenges and presents approaches for its implementation.

Since policies focusing on growth alone are no longer sufficient, Skuratowicz shares the view that the intersections of the social, economic and environmental domains need to be taken into account.

But he urges us towards a far more radical approach. Instead of short-term economic action, he stresses the need for a long-term strategic and integrated approach to avoid projects from different – or even the same – institutions competing for dominance and funding.

Going one step further, Skuratowicz highlights the need for more refined benchmarks and indicators to monitor and assess progress. In this context, he regards establishing a common international measure of poverty as essential and underlines that an issue will not receive adequate attention by political authorities unless an objective and reliable measure proves its existence.

Although many of the factors important to sustainable development have already been identified, he proposes to complement the current set of indicators with, for example, information on natural disasters, which would indicate the loss to ecosystems due to natural hazards. Other areas are culture, equity, food distribution and nutrition, information and communication technologies and international relations, where he suggests indicators could be improved.

"There is now a great opportunity to use development assistance as an effective strategic tool to support comprehensive approaches to sustainable development", he says.

out the country, while separating useful statistical data and using existing models such as pressure indicators, to produce documents on sustainability in the form of genuine environmental budgets containing a cross-sector assessment of environmental policies; and the simultaneous approval of the traditional and environmental budgets. This procedure, based on proper prior testing, can deliver useful information systems for policy-makers that directly influence decisions.

In line with EU initiatives, the choice is to make a break with the idea of "green GDP" and organise a system of satellite accounts, in conjunction with financial budgets.

Consequently, the bill contains many novel features. First and foremost, there is the decision to make it routine and compulsory to apply a form of environmental accounting to the budgets of the State, the

regions, the provinces and the municipalities in Italy. The second follows on from the first: the scientific and operational development of the accounts and of the techniques and modules of environmental accounting, so that they can quickly be used by the political and institutional system.

Statistics and accounts in tandem

Developing pure environmental statistics separately from applied environmental accounts is unsatisfactory. The world is full of information, data, studies and statistics. It is on the basis of use that we need to select which data to collect regularly. Criteria for selection could be: potential for useful comparison and parallel consideration with budget documents; acquisition of a register of information, selected in relation to the most significant powers and responsibilities at each government level across the country; and

phased development of headings as research progresses.

The documents on sustainability to be used as satellite accounts could include statistical data and real indicators and data, selected in a traditional but careful manner and designed to support planned decisions. Initially, the satellite accounts will be able to contain only a limited number of variables, selected on the basis of environmental priorities, specific circumstances and responsibilities relating to the budget policies of each government level.

Policy-makers do not need the general back up that comes from having maximum environmental information, but they really need the vital minimum. Anyway, simplicity and indispensability are almost always synonymous with effectiveness. For instance, the Human Development Index (HDI), an excellent development indicator used by the

United Nations, looks at only three parameters – GDP, schooling levels and life expectancy – but is one of the most highly considered indicators.

Organising responsibility

The ongoing preparation and approval of environmental budgets in parallel with ordinary budgets can serve three functions:

- ▷ information, because it brings specific, targeted and usable knowledge to the decision-making process;
- ▷ transparency, because it allows decision-makers to be aware of and make the public aware of the ecological facts about the environment around them – facts that are not always conveyed solely by prices and monetary value;

responsibility, because decision-makers cannot avoid looking at the current trends in environmental sustainability.

Adopting environmental accounting at every government level must not automatically induce an environmental mindset akin to eco-dictatorship. After all, economic statistics and ordinary accounting practices do not inevitably result in balanced budgets and sound management of the economy.

With the parallel and simultaneous approval of environmental and economic-financial budgets by elected representatives throughout the country, it should be possible to impose a principle of obligation in procedure and freedom of content in actual decisions.

Environmental budgets can:

- enhance the importance and value of the environment in political matters

and especially in government decisions;

- compel decision-makers at every level to consider the ecological viewpoint with the same seriousness they already apply to production and movement of monetary wealth;
- shift environmental policy from a position that is often only incidental and, at best, sectoral, and add it rather than suffuse it with other policies.

This idea of placing environmental budgets alongside traditional budgets must be brought out into the open. Why should authorities burden themselves with the job of compiling green accounts and ensuring transparency on the environment as well as on financial matters? Why should any mayor, with all the problems of filling in potholes in the roads and ensuring that services operate, be concerned about the

survival of some plant, maintaining some green area or checking annual air quality? He will only do it if he is convinced that this extra work will improve his administration's record, enhance the quality of life in his town, boost relations with his electorate and his ability to respond to their expectations.

It must also be remembered that, in connection with various environmental policies, accounting and budgetary policies have no particular limiting effects on operators. Command and control policies have an automatic effect on results. Economic instruments (incentives, disincentives, eco-taxes) provide guidance. Budgetary instruments measure, check and guide at the same time. They have an effect before, during and after decisions and, in particular, they spread the environmental mentality.

The role and prospects of environmental statistics in steering development policies towards sustainability are clear and fundamental. Those responsible for policy decisions don't need "data graveyards" with exhaustive data on every aspect of how human activities affect the environment, but statistical information that is manageable, comparable over time and easy to read, and which covers a few variables that have been deemed more important and relevant.

In addition, it is essential to move beyond reports on the state of the environment and produce proper documents or budgets that can be used to assess sustainability in a general or local context. Finally, legislation is necessary to encourage policy-makers to accept political responsibility for environmental data and budgets, in the same way as for economic and financial data.

The task of statistics must therefore be to select the right field of research and to produce data and indicators in response to the requirements and experience of those that are going to use them for economic and political decisions. This selection needs to be made in conjunction with the decision-makers and on the basis of instruments and procedures, such as environmental accounting, that ensure their use and validity in the field. If this path is followed, the awareness, transparency and responsibility of decisions that are made on the environment will certainly be enhanced for tomorrow's world. ■

Measuring sustainable development

Christian Avérous, *Environment Directorate, OECD*

Referring to the OECD's work in the area, Christian Avérous focuses on the development of a set of sustainable development indicators comprising information on economic, environmental and social changes. Presenting indicators of resources and indicators of outcomes, this approach requires both measures of how well we are preserving our assets (resource indicators) and on how well we are satisfying current needs (outcome indicators). In addition, it stresses the importance of extending national balance sheets to a broad range of assets (economic, human, natural), and of maintaining these assets to provide for future well-being. Two types of framework are also considered: accounting and analytical.

A preliminary set of indicators is proposed by the OECD which covers resources indicators (broken

down under environmental assets, economic assets and human capital) and outcome indicators (including consumption, income, health, employment and education). The set contributes to the broader work on sustainable development but is not considered definitive.

More work is needed particularly in developing a measurement framework to link the three areas of sustainable development and to develop indicators in relevant sectors (e.g. sustainable transport, sustainable agriculture, sustainable energy).

Christian Avérous also stresses that while a large amount of work is still required, measurement problems should not be seen as a barrier to the formulation and implementation of sustainable development policies.

Social exclusion and social cohesion

An introduction by Luigi Frey

The Lisbon European Council meeting in March last year stressed the importance of social exclusion and social cohesion statistics for analysing, monitoring, evaluating and solving the problems arising from the deep and rapid technological and socio-economic changes expected in the next decade.

These problems are of a multidimensional nature. The first and foremost is to collect and elaborate quantitative information about various variables, with changing characteristics and socio-economic incidence. To solve these problems effectively at European level, it is also necessary to define and calculate synthetic and comparable indicators linking different dimensions.

The CEIES subcommittee on social statistics took care of this issue in various seminars organised in the Netherlands, UK, Austria, Germany and Greece. We tried during the last five years to concentrate on labour statistics, which can be at least partially relevant for social inclusion/exclusion problems, and on the distribution of income and educational statistics, which are important dimensions of those problems.

Assuming that the problems of social exclusion/cohesion continue to be a growing chal-

lenge for an international community oriented to the well-being of all citizens, the subcommittee is moving gradually to a deeper and wider consideration of aspects such as: working conditions and health and safety at work statistics – which was the subject of a seminar in Dublin last May; lifelong learning measurement (subject of a seminar in Parma in June); active ageing statistics (The Hague, spring 2002); and social protection statistics (Lisbon, spring 2003).

The subcommittee believes that it is vital to stimulate and promote efforts towards a richer, more integrated, more internationally comparable European system of social statistics, to help us rise to the challenge.

Moreover, the subcommittee is convinced that the progressive improvement of this system cannot ignore the positive involvement of the Candidate Countries. Thus, starting from 2002, the subcommittee intends to propose seminars with the collaboration of Candidate Countries' National Statistical Institutes or user organisations. ■

Luigi Frey is Professor of Labour Economics at the University of Rome (La Sapienza), Italy, and chairs the CEIES subcommittee on social statistics.



Though it has a longer history, the notion of social exclusion has embedded itself into social policy discourse in Britain only since the general elections of 1997. But in spite of several British attempts over the past few years to measure it in a systematic and comprehensive way, the concept remains as elusive as ever.

At the European level, the Amsterdam Treaty has created a new momentum to combat social exclusion. In particular, EU Member States are being encouraged to cooperate in trying to achieve that goal. But trying to counteract social exclusion within a single country is difficult enough. To do so across 15 or more countries is a formidable challenge.

There are a number of important sources of data that can be mined to monitor social exclusion in Europe. Not only has Eurostat attempted to harmonise existing national data sources, but it also provides rich material for others to quarry through

cross-national studies such as the European Labour Force Survey and the European Community Household Panel (ECHP).

When the ECHP comes to an end, other sources (more likely to be cross-sectional surveys and aggregate statistics than panel data) will doubtless be deployed to similar effect. For instance, Eurostat has started work on non-monetary indicators of deprivation and social exclusion relating to individual means, perception and satisfaction.

But without detracting from the usefulness of these and other attempts, several generic obstacles remain that impede the comprehensive and accurate measurement of social exclusion at a cross-national level.

Excluding the excluded

Available sampling frames and administrative records tend to exclude the most marginal members of society, such as the homeless or roofless. In the same way, many survey samples also

Boosted by European policy developments, social exclusion has recently received much attention. **ROGER JOWELL** and **CARLI LESSOF** of the UK's National Centre for Social Research outline the obstacles to capturing social exclusion statistically.

A Europe-wide hunt for elusive measurements

exclude the institutionalised population – in old people's homes, residential homes, hospitals, hospices, children's homes, prisons and so on.

As a result, statistics based on existing sampling frames are bound to under-represent the potentially most socially excluded parts of the population. While this presents a problem for the measurement of social exclusion in any single country, the difficulties multiply when trying to make comparisons between countries whose administrative records and sampling frames possess very different deficiencies and biases.

It is also often difficult to obtain accurate information from or about marginalized groups in society, some of whom tend to be deeply suspicious of 'official' enquiries, while others cannot respond, say because they are physically or mentally ill or have language difficulties. In cross-sectional surveys, these problems generally manifest themselves as non-response bias, and in longitudinal surveys the problems tend to be



compounded over time by differential rates of attrition among the most excluded.

Moreover, some survey techniques, such as telephone interviewing or self-completion surveys, are generally ruled out for these subgroups. In any event, these sorts of biases – always very difficult to counteract – will inevitably arise in different ways in different countries with a high potential for generating artefactual cross-national variation.

The context is important

Comparisons between countries that are based on just a few measures are likely to be especially fragile in an international context, based on variables, which are essentially context-specific. They will tend to produce false positives or negatives that are not only difficult to detect but even more difficult to remedy.

In other words, shorthand measures of complex phe-

nomena may obscure rather than illuminate real differences. Low levels of electoral turnout, civic engagement or church attendance, for instance, may be good indicators of social exclusion at a national level, but are very problematical as indicators of differences between countries with different cultures, norms and histories.

Consider, for instance, the worrying phenomenon of declining turnout in national elections within a particular period. At certain times and in certain countries, this could be a function of a growing alienation among the electorate as a whole – highly relevant to the notion of social exclusion.

At other times it may merely reflect temporary demographic trends, such as during the 'baby boom' years when young people (who are generally less diligent as voters) formed a disproportionately large part of the electorate. It could also be a function of short-term national political factors or of changes in legislation, say the lowering of the voting age or the creation of devolved assemblies. More than one of these factors may apply at any one time. Either way, different legislative, social and cultural factors will operate differently in different countries, making comparisons very difficult.

Many other processes of social exclusion are similarly embedded within the legislative, social and demographic framework of particular countries. Voluntary or enforced early retirement schemes, for instance, may be a significant factor in precipitating



Roger Jowell and ...



Carli Lessof, UK's National Centre for Social Research

social exclusion in certain countries and not in others. The average age of retirement also differs between nations, as does the proportion of migrant workers, the relative impact of the minimum wage, the legal responsibilities placed on absent fathers for child support, and so on.

Identifying and exploring such differences is, of course, a key role of comparative research. But in this case a great deal of meticulous development work still needs to be undertaken before comprehensive, rigorous comparisons of the prevalence of social exclusion

in different countries are possible.

It is to be hoped that developments such as the new European Social Survey² will contribute some solutions to the countless problems still facing comparative social surveys in Europe. And it may even address

some of the substantive issues facing the measurement of social exclusion in Europe. But it is only one small vehicle.

The "principle of equivalence"

The fact remains that the most fundamental aim in any form of research, but particularly in the case of cross-national research, is to implement the "principle of equivalence". This embraces the need to achieve non-zero, equal (or known) chances of selection for all members of society in national samples, for detailed replicable definitions, for questions that have the same or equivalent meaning to all respondents, for coding schemes that are accurate and consistent across all cases, and so on. These problems have barely been broached, let alone solved, in relation to comprehensive, comparative measurements of social exclusion across Europe.

The statistical divide and social cohesion

Ineke Stoop, *Department of Data Services and ICT, Social and Cultural Planning Office, the Netherlands*



Social exclusion and social cohesion are multi-faceted phenomena that play a central role in the Lisbon strategy aimed at transforming the European Union into the most competitive and dynamic knowledge (and innovation)-based economy in the world. But they are elusive concepts that are hard to measure by clear-cut, easily measurable social indicators.

Drawing on the experience of the Netherlands, Ineke Stoop discusses the definition, measurement and theory of social cohesion, before pinpointing some major challenges that need to be met to

enable extensive analysis and subsequent policy-making.

First and foremost is the need for greater cooperation between social scientists and official statisticians: statisticians should not only respond to the needs of social scientists, but also share their statistical know-how with them.

Stoop asks statisticians to follow the development of "quality of life" studies and indicators, providing social scientists with data to develop more tangible and less subjective indicators.

Equally significant is the need to strive towards full population coverage, high response rates and analysis of possible bias due to non-response. The search for new data sources, such as the European Social Survey, and improved complementarity between the variety of sources, are also indispensable tasks.

In addition, micro- and meta- data and documentation need to be made more readily available, taking advantage of information technology tools as an additional means of stimulating discussion on both methodological and social issues.

A full agenda

There is clearly a need for more cross-national development work that seeks to define the situations, individual circumstances and behaviour patterns that constitute social exclusion, distinguishing as clearly as possible between processes and outcomes. Only then can we start to devise suitable data collection and analysis strategies that are capable both of measuring social exclusion as a concept, and of doing so in a consistent manner across countries and cultures.

Many different forms of research need to contribute to that process – from qualitative research on the one hand to sophisticated statistical analyses on the other. Longitudinal and follow-up studies may also be necessary in order to answer questions about the dynamics and persistence of individual-level problems – why, among people in the same objective circumstances, some sink and some swim, or how and why elements of social exclusion are transmitted across generations.

Meanwhile, focused quantitative studies are required to tackle the many different components of social exclusion, including the elements and correlates of 'social capital', access to financial and other services, and the impact of race, gender and age on one's propensity to suffer, or escape from, social exclusion.

The role of quantitative attitude studies in particular has been greatly under-rated. Too few pieces of research take into account the debilitating effect of the 'poverty of expectation' – the self-fulfilling downward spiral

among people or subgroups who feel excluded and whom, as often as not, others regard as marginal. Attitudes are as much a part of social reality as are facts and behaviour patterns, and we ignore them at our peril.

From monitoring to alleviation

Much of the research into social exclusion so far has concentrated on problems of measurement and monitoring rather than on opportunities for its alleviation. In due course, this emphasis will need to be shifted. In particular, we need research that helps to discover which policies work and which do not. While clear and workable definitions are a pre-condition of such diagnostic and evaluative studies, they are of course only the starting-point.

Since policies for combating social exclusion are increasingly aimed at areas rather than at individuals or households, the focus of at least some research should now begin to follow suit. Attempts will have to be made to develop area-based units of measurement and analysis. As in other forms of research, studies of social exclusion will need to be able to distinguish the impact of individuals on neighbourhoods from those of neighbourhoods on individuals, and to clarify their interactions. But if the aim is to differentiate between relatively small areas, large overall sample sizes will of course be required.

Finally, there is a serious shortage of methodological work in terms of question design, sampling experiments, scale construction,



The quest for a new social solidarity

Jean-Christophe Le Duigou, *Secretary of the General Confederation of Labour (CGT) and member of the Economic and Social Council in France*

Higher standards of living and increased wealth have not brought an end to inequality, nor necessarily reduced it. As society has changed, so has inequality.

Starting with this premise, Jean-Christophe Le Duigou calls for a "reassessment" of investigative tools for a better understanding of the new types of inequality, within social categories, and the multidimensional nature of inequality. He does not think that the traditional indicators, based on a monetary approach using average figures, reflect these changes.

Referring to "statistical interference" as a result of the shift in the social debate from results to equal opportunities, he asks for statistics to make a better contribution to the social debate so that public policies on inequality can be better assessed, especially as they have diversified over the last 20 years.

Statistical developments are also desired with regard to taxation and compulsory levies, so that national situations can be better compared, at a time when fiscal competition is a factor in the internal market. But also with regard to forecasting, to provide a better response to the risks of losing a job and to anticipate future upheavals in work caused by technological advances.

validation techniques and analytical methods, all of which need to go through a process of meticulous cross-national development work, testing and validation before being adopted. This applies as much to indicators based on new uses of administrative data as to new questions in social surveys.

There is, in short, still a small mountain to climb. ■

1. Five major British attempts to measure the phenomenon of social exclusion are described in the paper given by Jowell/Lessof at the CEIES decennial conference on 26/27 April 2001. Conference papers are available at <http://forum.europa.eu.int/Public/irc/dsis/ceies/library>
2. The European Social Survey is a new multi-national survey funded under the 5th Framework Programme, which is to go into the field in 2002. (Further details from r.jowell@natcen.ac.uk)

In favour of up-to-date, independent and confident statistics

The closing session provided an opportunity to review progress, to set the priorities for the future, to define policy and to identify the most important areas of activity. These discussions focused mainly on proposals for concrete cooperation between the statistical system and scientific and business circles, and also on the shape and structure of such cooperation. The proposals which emerged also reflected the composition of the CEIES, as well as the diverging, though essentially complementary, interests of its members – confirmation that the CEIES is fulfilling its assigned role. **FONS THEIS** sums up the main discussion points.

Official statistics have an enormous influence on public opinion. Journalists, the intermediaries between statistics and users, expect them to be "more confident", but simultaneously to provide more and better information. As one media representative said: "Well-informed journalists write better".

The media have three concrete requirements:

- ▶ In general, for national and Community statistics, it is necessary to shorten **the time-span between collecting and publishing data**. The current gap is still too large, particularly in comparison to the USA. Without getting carried away by the financial mar-

kets' dreams of real-time information, efforts must continue to speed up publication of statistics.

- ▶ The media still trust the **authenticity** of the statistics, but they do not believe that the data are always correct. Thus, it is necessary to constantly improve the quality of data and ensure that the various statistics are coherent.
- ▶ Although statistics are undoubtedly compiled in a very professional manner, they must remain completely **independent** of political influences, must not be pushed to make any concessions. For their part, the media are ready to defend statistical independence.

arena and endangering their independence? How high is the quality of any projections? Can political circles exert pressure on statistics to make projections which are favourable to them?

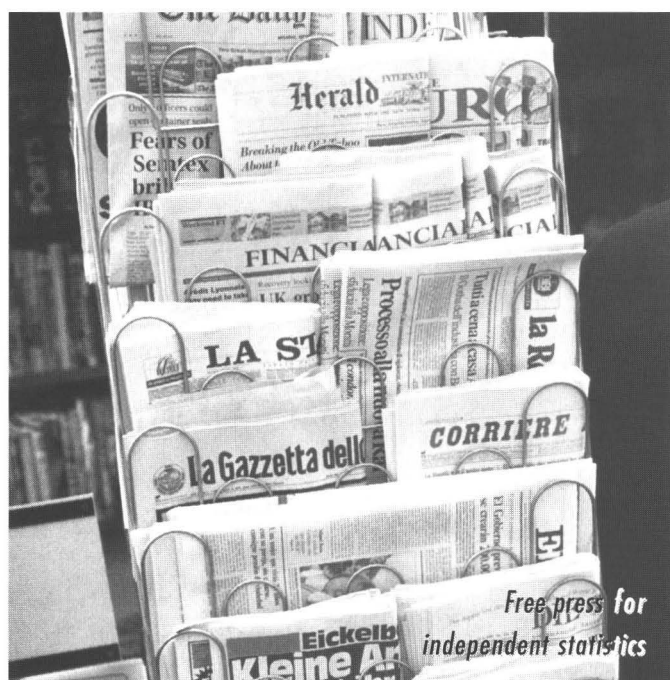
No consensus could be reached on this at CEIES level, since national traditions and experience are too diverse and, as the participants confirmed, the boundaries are fluid and the balance very delicate. To date it had not been possible either to reach agreement on this within the European Statistical System. Each National Statistical Institute has developed its own culture in this field: some dare to make projections, others are dead against them.

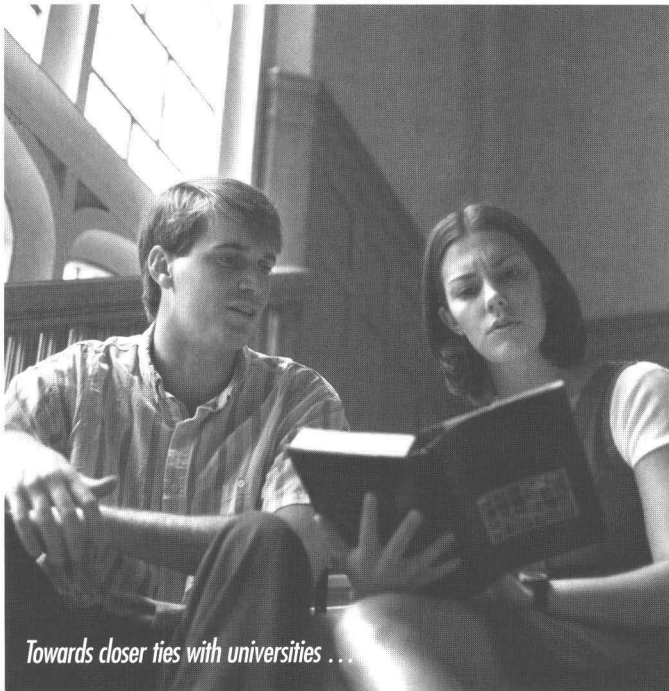
Projections – or not?

One question raised was whether official statistics should and can risk making projections, thereby perhaps interfering in the political

Promoting exchange

During the discussion there were many calls to strengthen the cooperation between





Towards closer ties with universities ...

statistics and universities, particularly the institutes engaged in macro economic research. Professors and students must know which data are available at EU level. This calls for a new organisational structure.

Such exchanges could perhaps be organised by national statistical bodies. The CEIES could provide a forum for such discussions, eg. at technical meetings.

Demand for Community data in scientific circles continues to grow. A well-conceived policy of dissemination would influence links with science, but also the quality of the data produced. However, existing dissemination methods are not satisfactory.

For research requirements, access to aggregated data or to micro-aggregated data is not enough. Micro-data are also necessary, since a free market needs to analyse data from a number of different perspec-

tives. Obviously, when working on micro-data, special care must be taken to ensure that individuals cannot be identified and to guarantee full confidentiality. Three possible approaches present themselves, ie.:

- ▶ A secure medium- to long-term framework for free access to Internet services and databanks.
- ▶ Access by scientific circles to secure micro-data, where available.
- ▶ A legal framework for processing data in a secure virtual environment.

However, as was emphasised, current practice lags far behind the ideal. While Eurostat had taken some important initiatives, other measures were still outstanding, eg. extension of the series collected, price-fixing based on the criterion of marginal costs, and a draft Regulation on access to confidential data.

Greater involvement of enterprises

The various sides stressed the need to strengthen cooperation in the area of industrial statistics, between the statistical offices on the one hand and the federations and enterprises on the other.

Industry, frequently only indirectly represented in the various bodies, must become more involved. The constant changes in industry, occurring at an ever faster pace, must be reflected in statistics – in classifications, in sampling methods and sampling frequency and in data analysis.

In the business field, there must also be progress on processing micro-data. Some Member States are engaged in discussions along these lines, but these should be extended to EU level.

Companies are required to make considerable efforts to supply data, and expect to receive corresponding feedback. However, their experience to date in this area has tended to be somewhat disappointing.

A further request from companies was that economic statistics should not, in future, be defined solely by Economic and Monetary Union. Companies also need statistics tailored to their needs, and guidance from the CEIES was also desirable in this field.

Appropriate seminars with industry can pave the way for practical cooperation. These should also examine how surveys can be conducted at the lowest possible cost and also how to facilitate the mutual transfer of data using modern information technology.

It was pointed out that, in general, the issue of access to micro-data gives rise to two conflicting attitudes. On



... and enterprises

the one hand, it is necessary to improve the processing and adjustment of data to form a coherent whole. However, this takes time and obviously delays speedy processing.

On the other hand, there is the need for more up-to-date and timely data. Seminars to discuss concrete experience of exchanging micro-data could also be of assistance here, because they would permit comparisons of current good practice.

Seminars as a useful forum

The seminars organised by the CEIES are generally regarded as one of its most successful components. Hence the wish to continue this form of cooperation, while concentrating on three topics, ie. in the framework of the EMU Action Plan, improvement of the euro-indicators used to evaluate economic trends in the euro-zone, EU enlargement and the development of structural indicators. Since this latter in

particular is a long-term statistical task, the Candidate Countries should be involved as rapidly as possible.

To strengthen links with political decision-makers, the conclusions of the CEIES should be distributed, not just to the Commission, but also to the Council of Ministers and the European Parliament.

Anything that can promote dialogue is, itself, positive. The economic and social councils, by virtue of their structure and mission, are well poised to do this. Likewise, a considerable share of statistics can enrich social dialogue, *inter alia*, on sustainable development and social cohesion.

The inclusion of new fields, such as the quality of employment, the working environment, social flexibility, reinsertion in the workforce and the functioning of the social state all call for new types of statistics which must take account of regional and national, but obviously also Community, realities.

Confronting the challenge

As Vice-Chairman Joachim Lamel pointed out, as did likewise the Commissioner, Pedro Solbes, the topics which the CEIES will have to deal with in future mainly cover three fields ie. Economic and Monetary Union, Community enlargement and the Lisbon Process, which has set itself the target of making the EU the most competitive and most dynamic economy in the world, with better social cohesion.

On top of this there is the information society, which has still not been fully defined in statistical terms and which requires user-friendly definitions of the relevant terms, as well as all the issues linked to sustainable development in the economic, social and ecological fields.

According to Lamel, there are two consequences for the CEIES: by combining subcommittees and seminars, there will be an ideal platform to examine the sta-

tistical issues and to involve the various elements of civil society in the discussions, thereby giving the CEIES a more powerful voice.

This will mean, as suggested by Alain Chantaine, greater dialogue with the EU Council of Ministers and the European Parliament. Other central concerns of the CEIES must include the strategy for publishing statistics and the secure use of micro-data.

The CEIES must also continue to try to convince the Candidate Countries of its usefulness and promote dialogue with the users in these countries. In this context, it is necessary to consider whether the current structure of the Committee can be maintained in the framework of enlargement, or whether it might not be preferable to develop a new structure adapted to an enlarged Community, in order to permit an equally fruitful exchange of ideas in an enlarged Union. ■

Future activities

The seminars that the CEIES has been organising since 1996 enable experts from all over Europe to discuss topics of current interest. And they have proven to be a huge success not least because of the possibility to participate actively in the seminars.

For the second half of 2001, two more seminars are on the agenda:

- one on inflation in Europe — its different measures and their users, taking place in Berlin in October, and
- another on the question of how to meet the new needs in agricultural statistics and consumer information, to be held in Luxembourg in November.

In January 2002, a seminar will deal with the New Economy and the service sector and how to measure it.

The results of the seminars are published in a special CEIES series and are available at the secretariat (deborah.evans@cec.eu.int). The working documents as well as invitations and further information about the seminars are available at <http://forum.europa.eu.int/Public/irc/dsis/ceies/library>



Forming the backbone of the Committee — the CEIES secretariat with (from left-to-right) Josée Nollen-Dijcks and her successor, as from September, Annika Näslund, together with Nicole Lauwerijs and Deborah Evans.

One of the models for the CEIES, the European Advisory Committee on Statistical Information in Economic and Social Spheres, was Germany's **Statistical Advisory Committee**, a legally-established body representing the users, providers and producers of Federal statistics. Here, **PIA BRUGGER**, who is in charge of basic statistical questions and national coordination at the Federal Statistical Office, describes the tasks and procedures of the Statistical Advisory Committee and outlines its contribution to programme planning.

An active role in formulating statistics

Germany's Statistical Advisory Committee – a legally-constituted body representing the users, providers and producers of Federal statistics – has the task of advising the Federal Statistical Office on fundamental issues. Since its inception at the beginning of the 1950s the Statistical Advisory Committee has concerned itself with such topics as the development of official statistics, the burden placed on respondents or specific methodological problems.

The Statistical Advisory Committee also provided support for official statistics in dealing with the challenges thrown up by exceptional situations, such as the judgment of the Federal Constitutional Court on the census (1983), German unification (1990) or the single market (1993).

Committee discussions make it possible to exploit the know-how and experience of outside experts in the planning and development of official statistics. Both users and respondents have an opportunity to outline their interests. Official statistical bodies can draw attention to their concerns and clarify the feasibility of propos-

als in discussions with the parties concerned.

A legally established body

The establishment of the Statistical Advisory Committee under the auspices of the Federal Statistical Office was provided for by the Federal Statistical Act. The Committee is made up of voting representatives from trade and industry, the professions, employers' associations, trade unions, agriculture, economic institutes, universities and local authority umbrella organisations.

Representatives of the Federal Ministries, the Federal Court of Auditors, the Bundesbank, the Land Statistical Offices and the Federal Data Protection Officer also sit on the Committee in advisory capacity. Representatives of the Land governments are also invited to its meetings. The competent Federal Minister selects the associations, which may propose voting members, and representatives are appointed by the President of the Federal Statistical Office on

the recommendation of these associations.

Pursuant to the Federal Statistical Act, the Federal Statistical Office is responsible for management. Its President chairs Committee meetings. The Committee drew up rules of procedure to deal with procedural issues.

The Committee set up special expert committees for the detailed discussion of individual statistical issues and the examination of specific methodological or technical questions. These expert groups are generally organised along the same lines as the Federal Statistical Office. For example, there are expert committees which deal with manufacturing, environmental and social statistics. At the same time, others are responsible for specific issues, such as classification or regional statistics. The expert committees are always chaired by the relevant departmental head of the Federal Statistical Office.

In addition to these committees, the Statistical Advisory Committee set up working parties with responsibility for information and public relations,

mathematical methods and vocational training statistics. In special cases, outside experts may be invited to attend expert committee and working group meetings. The Federal Ministries must be invited to send representatives to meetings of the Committee and its organs, at which they must always be entitled to speak.

Current issues ...

The Statistical Advisory Committee generally meets once a year, although it also holds extraordinary meetings when necessary. This summer, it will examine, *inter alia*, the use of administrative data in connection with economic statistics, the introduction of a national company registration number covering all public services, the East-West division of Berlin for official statistical purposes, the statistical analysis of e-commerce, a test procedure for the register-based census and major European projects.

... and future issues

The "Recommendations of the Statistical Advisory Committee on the future development of official statistics", which were presented to the Federal Government in summer 1999 are crucially important for the future of this sector. In this connection, Johann Hahlen, the President of the Federal Statistical Office, observed: "From the standpoint of official statistics, it is encouraging that the Committee's recommendations include not only proposals for reductions but also future guidelines for Federal statistics".

In addition to alleviating the obligatory statistical burden on respondents and reducing expenditure on official statistics, the Committee's main aim is to

bring the statistical programme into line with current and future information requirements.

Whilst one top-priority recommendation – the introduction of service-sector statistics in Germany – was successfully put into effect, great efforts are now being made to implement other central proposals, such as the greater use of administrative data for statistical purposes and the provision of anonymous microdata. The recommendations concerning the reorganisation of energy, work-force and earnings statistics are also of major importance for the future of official statistics.

The success of the Statistical Advisory Committee from the standpoint of users and respondents has led to suggestions that similar committees might be set up to advise other bodies producing official statistics, such as the Federal Labour Office or the Bundesbank.

The report of the "Committee to improve the information infrastructure between science and statistics", set up by the Federal Minister for Education and Science, Edelgard Bulmahn, proposes an extension of the Committee's range of activities. The Bulmahn Committee suggests that the Statistical Advisory Committee should be more closely involved in medium-term programme planning and should be granted a legal right to be heard prior to the introduction, abolition or significant amendment of official statistics.

In this way, the law would, for the first time, recognise that the scientific and economic sectors, the trade unions and local authorities have a formal right to participate in the design of statistical survey programmes. ■

In his contribution, **REINER STÄGLIN**, Chairman of the **German Statistical Society** deplores the lack of public awareness of official statistics as the source of a vital public asset and the fact that users of statistics in Germany are far too reticent about their real information requirements. He regards it as one of the main tasks of the Society to change this situation.

The link between producers and users of official statistics

Alongside the Statistical Advisory Committee, which, like the CEIES at European level, acts as an advisory body within the federal system of official statistics in Germany, the German Statistical Society [*Deutsche Statistische Gesellschaft – DstatG*], which was founded in 1911, sees itself as a scientific association that aims to provide all the various types of statisticians with a forum for advancing knowledge and exchanging experience.

It accordingly regards its scope as including the science of statistics, official statistics and economics alike.

DstatG currently has 760 individual and 40 corporate members from all areas of applied and theoretical statistics. The spectrum ranges from mathematicians with statistical know-how, through empirical economists, econometricians and sociologists, medical and technical statisticians, methods-oriented biologists and psychologists, producers of data for official and unofficial statistics

including market research and opinion polls, to economists in businesses, associations and public administration responsible for tasks involving analysis and planning.

A report by a Committee set up by the Federal Ministry of Education and Research with a view to improving the information infrastructure between science and statistics has certified that *DstatG* has the potential for making a successful contribution, as a representative of the world of science, to drawing up survey and processing programmes.

This should be taken into account the next time the Federal Statistical Act is revised, and *DstatG*, which has hitherto been a non-voting guest-member of the Statistical Advisory Committee should be recognised as a full member.

More than ever before, fruitful cooperation in all areas of statistics demands an intensive exchange of

ideas not only within the individual disciplines, but above all between them. This is true not only at national level, but increasingly at international and, in particular, EU level. *DstatG* regards it as one of its tasks to make a contribution to this process.

Broad scope for action

In order to put these ideas into practice, *DstatG* has set up sub-committees to work on selected areas. At present there are seven sub-committees, working on

- ▶ New statistical methods,
- ▶ Business and market statistics,
- ▶ Regional statistics,
- ▶ Empirical economic research and applied econometrics,
- ▶ Statistics in the natural sciences and technology,

► Statistical survey methods, and

► Training questions.

DStatG also organises seminars, workshops, symposia and training events. Central to these is the 'Statistical Week' organised jointly each year with the Association of German Municipal Statisticians. As can be expected, given *DstatG*'s clientele, the participants come from all areas of statistics.

The subjects discussed reflect the broad spectrum of the Statistical Week ranging from panel analysis – the subject of the Statistical Week held in Dortmund in September 2001 – through statistical analysis of financial markets to subjects such as 'Statistics and the Environment' or 'Statistics and Society'. It is planned to reorganise the Statistical Week in order to make it more attractive by tightening up the timetable and offering a more flexible choice.

In addition to the Statistical Weeks, the more theoretical Whit Congress has been established as an independent event for more than two decades. In view of increasing specialisation in the fields in which statisticians work and the rapid progress in many subsectors, the Whit Congress has become a vital source of information on all the newer developments in theoretical research.

Events such as colloquia and workshops also form a permanent part of the activities



Reiner Stäglin studied economics at the Free University of Berlin and graduated in economic sciences in 1967 at the FUB. Except for some time spent doing research in Cambridge (USA) and working as an adviser for clients including Eurostat he has been working at the German Institute for Economic Research in Berlin since 1962.

Since September 2000, Prof. Stäglin has been President of the German Statistical Society (<http://www.dstatg.de>). Through his teaching at the Free University and the Humboldt University in Berlin, his membership of the Statistical Advisory Board as representative of the economic research institutes, his contacts with official statistics, and not least his work at an economic research institute, he unites the three pillars of the Society – science, official statistics and economics.

of the German Statistical Society. In March of this year, for example, the Business and Market Statistics Committee ran a workshop on 'Requirements for an informative system of economic statis-

tics' and the tenth colloquium on 'Business in statistics – concepts, structures and dynamics', organised in collaboration with the Federal Statistical Office, will be held in Wiesbaden in November 2001.

With a view to recruiting new members, the Society has, since 1997, been running workshops for the new generation of statisticians, as well as offering trial membership for one year free of charge. At these workshops, up to 15 participants can report on their research work and discuss it with internationally recognised experts.

DstatG expresses its views on fundamental and topical questions of relevance to statistics by producing and disseminating publications. The oldest periodical devoted purely to statistics in German-speaking countries is the General Statistical Archive, which was first published in 1890.

At international level, the German Statistical Society contributes, through its President to the planning of how Germany intends to present itself at the World Congress of the International Statistical Institute in Seoul this year as host for the next ISI World Congress in Berlin in August 2003. It is, of course, also involved in the preparations for that event.

Making up Germany's backlog

The German Statistical Society also sees itself as responsible for improving training for students and further training for persons in employment as well as for improving the statistical culture as a whole.

Germany, unlike the English-speaking world, does not have any real statistical tradition to speak of. The public is relatively unfamiliar

with using statistics and the role of statistics in and for society is not recognised.

Even at higher-education establishments, training in the use of statistical tools is often inadequate, quite apart from the reduction in professorships and teaching staff in the field of statistics. Only at around one quarter of German universities with an economics faculty is it possible to study the contents and working methods of official statistics as part of a course in economic statistics. Courses need to be more practically based and include a greater knowledge of official statistics. This includes, of course, the use of more realistic data sets for model calculations instead of randomly generated data.

However, the willingness of decision-makers in Germany to provide an appropriate infrastructure for the development for the information society with adequate resources is rather on the decline. For example, as I see it, the rejection of the pan-EU census is politically irresponsible, as it would have been vital for the paradigm shift in the direction of register-based statistics. I also regard the so-called 'streamlining' of the official statistics available – in other words, the cuts – as questionable.

DStatG is called upon here, in its role as a mediator, to bring user interests more into the forefront of the debate and, in the future development of official surveys in Germany, to promote the use of harmonised comparable European data. In this

process it can in many respects draw on the Commission recommendations for improving the information infrastructure between science and statistics, which, among other things, set priorities for the continuation and development of important statistics, make proposals for training and further training, and stress access to aggregated data and microdata.

A European dimension for statistics

The current social upheavals we associate with 'globalisation', 'New Economy' and the 'information and knowledge society' are placing increasing demands on statistics.

DstatG's response is to step up its European and international contacts. For example, we are trying to establish cooperation with both the Austrian Statistical Society and the Swiss Association for Statistics and National Economy, not only in order to give Statistical Week 2002 in Konstanz an international dimension, but also so that we will be able to cooperate on other activities, such as Austria's 'Statistics in School' programme.

Cooperation with Eurostat, which led, *inter alia*, to the inclusion of 'Statistics and European Integration' as the central theme of Statistical Week 1994 in Vienna, should result in joint efforts towards giving Statistics in Germany an appropriate European dimension. The starting position is good, since the

elected board of *DStatG* for the first time includes a statistician from Eurostat, Dr Werner Grünewald.

Increasing use is being made of European data for everything from answering questions of economic and financial policy to extrapolating and assessing long-term changes both in the economy as a whole and in individual branches, and we welcome the progress that has been made in producing statistics for the European Economic and Monetary Union.

In particular, the implementation of the European System of Integrated National Accounts (ESA 95) is invaluable for the harmonisation and comparability of economic data in Europe.

There are, however, also a number of shortcomings in European statistics that cannot simply be explained in terms of Eurostat's supranational position with all the dependency on the national offices that this implies. On the one hand, Eurostat's data are in many cases lacking in transparency and are inadequately documented, which can make them difficult or impossible for users to interpret.

On the other hand, there is the unwillingness on the part of Eurostat to make data series specially produced for the Commission – eg. data on capital stock in selected Member States – also available to external users in the form of estimates. This, however, has to do with a basic problem with Eurostat: the Statistical Office of the

European Communities should not, as a pan-European institution, concentrate too much on the concerns of the Commission, but should take more account of the interests and codetermination of the Member States, quite apart from the generally acknowledged principle of subsidiarity.

Every day in my work at the German Institute for Economic Research (*DIW*) in Berlin, I see how important it is to have efficient and inexpensive access to statistical data. In our work on structural research, input-output analysis and services, my colleagues and myself are dependent on up-to-date, high-quality statistics and are unable either to study economic events in Germany and elsewhere or to give advice on decisions regarding matters of policy, the economy or administration if we do not have the necessary basic data.

It is vital for the future of statistics in Europe that we react more flexibly than in the past to the rapid changes in society and the resultant need to have information at short notice by means of centrally-conducted *ad hoc* surveys that have been freed of sometimes obsolete classifications and systems. This, like the agreement on a EU-wide standard seasonal-adjustment procedure, is an area for action by the CEIES. The German Statistical Society is prepared for making its contribution to the further development of statistics. ■

A tiny principality of banks – this is what springs to mind at the mention of Liechtenstein. *Sigma's* BARBARA JAKOB met **CHRISTIAN BRUNHART**, head of statistics at the Office for Economic Affairs, to find out about statistics in the European Economic Area's smallest member country.

A statistical excursion to Liechtenstein

Liechtenstein, at 25 km long and between six and 12 km wide, is located between Switzerland and Austria and is bordered by the Alps on one side and the Rhine on the other. It has a population of a little over 32 000 inhabitants. Just 1.3% of the labour force is employed in agriculture. Over half work in commerce and services, and 25% of these in turn are employed in legal consultancy, trust management and banking, accounting for 13% of the country's total active population. Around 45% of the working population is employed in trade and industry, which is dominated by high-tech products in the mounting and heating sectors as well as precision engineering apparatus and coating plants.

With a population of around 32 000, Liechtenstein employs some 25 000 people. 38% of those working in Liechtenstein commute from neighbouring countries, the



© photo Liechtenstein-Tourismus

proportion of immigrants being around 34%.

A unique situation

"Clearly, the statistics we produce differ from those of larger countries", explains Christian Brunhart. "On the one hand, it is so much easier to keep track of the things we are compiling statistics on. On the other, our data must be very precise, because it is an easy matter

for communes, authorities and interest groups to accurately assess the situation themselves, and the slightest discrepancy is immediately obvious.

"Representative sample surveys are effectively ruled out, full surveys being the only option. These can, however, be carried out at reasonable cost in a small country such as ours, though of course the burden

on respondents is disproportionately greater than in countries where sample surveys can be conducted."

A recent example are the road transport statistics currently being developed. While this is a sample survey in other EEA member countries, in Liechtenstein the enterprises concerned will have to provide information several times a year.

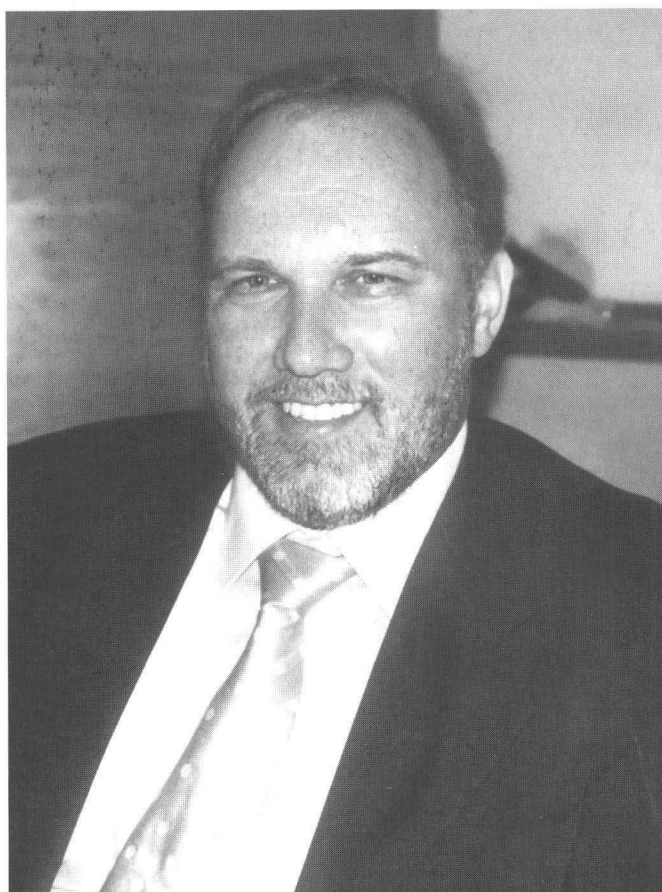
"However, the main drawback is the danger of being able to identify individuals or enterprises", continues Brunhart. "With tourism statistics, for example, the only way we could guarantee data protection was by doing away with the distinction between hotels and private rooms, and by aggregating communes. Likewise, the trade data we send to Eurostat each month contain confidentiality clauses to prevent the competitors of Liechtenstein-based concerns being handed the latter's business data on a plate."

Liechtenstein's national accounts

The uniqueness of Liechtenstein's situation also explains why it had not hitherto compiled its own national accounts. Of course, it did provide gross domestic product (GDP) and national income using estimates – but the degree of uncertainty was high, and it was not really until VAT was introduced and the business register set up that the way was paved for a set of national accounts.

December 2000 saw the publication of the first set of national accounts for the Principality of Liechtenstein covering the year 1998.

The Liechtenstein national accounts are based on Wilfried Oehry's doctoral thesis and are built up according to ESA95, though with a reduced accounting framework. Oehry developed the methodology and produced the first accounts in conjunction with the tax authorities.



Christian Brunhart's CV is not that of an average Head of Statistics, a field to which he came fairly late.

After studying electronic engineering (software) in Switzerland, he worked for the semi-conductor industry, setting up high-vacuum plants for customers around the world. Tired of travelling, he then devoted himself to starting a production plant for precision resistors, and five years later he moved into product management and selling capital goods.

Seven years later, in 1994, a contract involving IT modernisation and database upgrading attracted him to statistics, where he discovered "an entirely new and fascinating area of work". Liechtenstein's accession to the EEA in 1995 once again made frequent travel very much part of his work, contrary to his expectations. He now finds travel less of a burden and more of an opportunity of drawing on international contacts.

By way of a footnote to this atypical CV, Christian Brunhart is not just a member of the Liechtenstein parliament, he is also a member of the Parliamentary Assembly of the Council of Europe in Strasbourg – in Liechtenstein, a civil servant is legally entitled to be a member of parliament.

"Obviously, we made sure we were in line with Switzerland and the Austrian Statistical Office", says Brunhart. "We were keen to draw on the experience of our neighbours and wanted to make sure that everything was compatible and that we were not striking off on our own."

"Initially, enterprises and associations were highly sceptical. However, when the accounts were published, the reaction was much more positive. People were pleased to finally have a central set of internationally comparable figures, even if they can only be published once a year."

A department of generalists

With just nine members of staff, some of them part-time, the statistics service is, like the country itself, of modest proportions. The statistical service of the Office for Economic Affairs produces a statistical yearbook, also published in condensed form as "Liechtenstein in figures". This is very popular with businesses, authorities and private individuals, and appears in German and English.

In addition to population statistics, naturalisations and labour-market data, the standard programme includes statistics on banking, construction, tourism, a structural survey of agriculture and a quarterly business survey. Data are also produced on the energy sector, health insurance, the number of motor vehi-

cles and new vehicle registrations.

"We're an outfit of generalists" says Brunhart. "Given our small number of staff, we can't afford to have experts who concentrate on the same area year in, year out. But it's precisely this that makes my job so interesting. My remit covers a whole range of activities, from developing databases to negotiating with Eurostat.

"On the down side, what I produce is mine and mine alone, simply because there are so few people to share the load."

An independent part of the State machinery

Brunhart explains that official statistics are an integral part of the State machinery and part of the Office for Economic Affairs for purely

practical reasons: "There would be no point having a separate office for each specialist area. In the Office for Economic Affairs, there are some areas we have little or nothing to do with. This is why there is no conflict of interests as a rule, and why there is little danger of pressure being brought to bear on statistics."

The problem of independent statistics was recognised in 1975 when the Statistical Office was merged with the Office for Economic Affairs, which is why the following year saw the law on Official Statistics passed.

The aim of this law is to safeguard the independence of statistics and protect the interests of those supplying information. Survey data may be used for statistical purposes and statistical purposes only, not for tax assessment, criminal prosecution, etc. The main

practical consequences are in the construction of databases, where every care must be taken to ensure that access is restricted to members of the statistical division only.

The statistical law also carries a response obligation. If, in spite of repeated reminders, a person refuses to supply information or wilfully provides inaccurate or incomplete data, he or she may be fined.

However, no such fines have yet been imposed, so the response obligation cannot be the only reason why the response rate for surveys in Liechtenstein is generally over 95%. "There again, we steer well clear of sensitive subjects such as wages and salaries" – there are no wage statistics in Liechtenstein – "otherwise, I'm sure we'd have more problems with response", says Brunhart.

Neighbouring Switzerland

The statistical programme is restricted in other areas too. For example, there are no price surveys in Liechtenstein, which uses Switzerland's consumer price index instead. Likewise, population censuses are carried out in conjunction with the Swiss Federal Statistical Office. There has been a customs union with Switzerland since 1924, which explains the close economic links between Liechtenstein and its neighbour to the west.

For Liechtenstein this means, for example, that trade flows with Switzerland are not recorded, but can only be estimated via data from trade associations. Switzerland's customs authorities compile external trade data for the economic area as a whole, though these statistics are restricted to direct imports and exports for Liechtenstein.

Nowadays, statistical cooperation is formally restricted to the population census, though business structure surveys were previously carried out on a joint basis. These data can now be taken from the business register. Good contacts with Switzerland make it the first country that Liechtenstein turns to if it needs advice and help in setting up a new set of statistics, as is currently the case with the road transport statistics.

"Our view of neighbouring Switzerland provides major input for our statistics", says Brunhart. "Which is why we

Social work as a driving force for statistics

As in many other European countries, the history of statistics in Liechtenstein began with the population census.

The first decree for the conduct of a census was issued in 1815. Censuses were a regular feature of the customs union with Austria (1852-1919). Since the conclusion of the customs treaty with Switzerland in 1924, they have been carried out in close cooperation with the Swiss Federal Statistical Office.

The relatively short history of an indigenous statistical office in Liechtenstein is linked with the name of Andreas Eberle. In 1948, as Head of the Office for child welfare, he was commissioned with the task of obtaining statistical documents for old-age and survivor's insurance in Liechtenstein.

He clearly carried out this task to the satisfaction of the commissioning parties, as subsequent statistics to emerge from his office were

on fire insurance and health insurance.

In 1950, the office finally changed its name to the Office for child welfare and statistics, and agricultural and civil-status statistics were drawn up. On Andreas Eberle's retirement, the Office for Statistics was merged with the Office for Economic Affairs (1976). That same year a statistical law was passed to guarantee independent statistical work within the Office for Economic Affairs.

try to keep abreast of developments in Switzerland, particularly by participating, as an observer, in the Swiss statistical association."

And European neighbours

EEA membership means that Liechtenstein also looks further afield. "Statistics in Liechtenstein needed a change of direction" says Brunhart. "Previously, we were far too caught up in ourselves. EEA membership has expanded our horizons."

Statistically speaking, joining the EEA meant more in the way of commitments. For example, tourism statistics had to be brought into line with EU standards, and a farm structure survey and business register had to be set up. For Brunhart, the introduction of a business register and the national accounts represented "a quantum leap for Liechtenstein statistics".

The biggest challenge was combining the various regis-



Though the Föhn, a warm wind blowing down the northern slopes of the Alps, is strong enough to blow roofs away in Liechtenstein, it also allows vines to be cultivated in what is otherwise a mountain climate.

ters (trade, commercial, tax, etc.) and drawing up rules of play for all the parties concerned. Most of the work on the business register has since been completed. The transitional deadlines provided for in the EEA agreement (along with the review clause) expired at the end of 1998. The introduction of road transport statistics is the last matter currently being negotiated.

Keeping it together

To Brunhart's mind, the fact that Liechtenstein belongs to two different economic areas – it is a member of the EEA and in a customs union with Switzerland, which is not itself a member of the EEA – does not create problems, statistically or otherwise. And it certainly helps that Switzerland closely follows EU standards in its sta-

tistics, and applies European classifications and systems.

Brunhart rates statistical cooperation in Europe highly: "It has provided our statistical system with great impetus and helped it make considerable headway." Nevertheless, merely keeping abreast of the most important developments makes great demands on the head of statistics, who is effectively the only person to attend international meetings. "We can't attend all working party meetings – we must restrict ourselves to the areas in which we have to deliver statistics."

Liechtenstein's prime objective is to become an integral part of the European Statistical System, honour the commitments arising from EEA membership and keep pace with the ESS. "It is not our ambition to be a driving force within the ESS", stresses Brunhart. "We haven't got enough experts for that. Nevertheless, we are keen to keep pace with international developments, and believe this is quite possible if we follow Eurostat's guidelines."

The Principality of Liechtenstein

is a constitutional monarchy based on democratic and parliamentary principles. HSH Prince of Liechtenstein Hans Adam II has been the Head of State since 1989. Government affairs are managed by a five-member collegial government appointed by the Prince on the recommendation of the 25-member *Landtag*.

Politically, the country is divided into an *Oberland* [upper country] of six communes and an *Unterland* [lower country] of five communes.

Because of the large number of commuters from neighbouring countries and the high proportion of foreigners

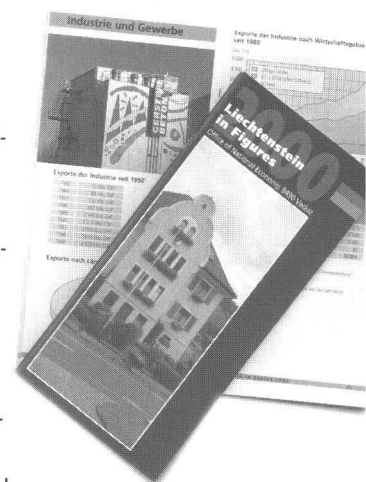
resident in the country, Liechtensteiners are generally in the minority at the workplace. With a population of just over 32 000, Liechtenstein offers some 25 000 jobs and is thus a significant source of employment in the region.

In the second half of the 1980s, the unemployment rate was steady at under 0.2%, rising in the 90s to over 1%. After peaking at 2.0% in 1998, it fell back to 1.2% in 1999.

Figures from the Chamber of Industry and Commerce show that, in 1999, Liechtenstein industry exported goods to countries around the world (including Switzerland) to the value of some 3.9 billion Swiss francs.

In 1998, GDP was 3.6 billion Swiss francs, which is around 100 times smaller than that of Switzerland and Austria and around 1000 times smaller than that of Germany. Liechtenstein industry is extremely productive, GDP per full-time employee being 169 000 Swiss francs.

Liechtenstein has demonstrated sound management of its national budget for many years. The government accounts for 2000 show revenue of 829 million Swiss francs and expenditure of 595 million Swiss francs. After allowing for 64 million Swiss francs of depreciation, the final account shows a surplus of 170 million Swiss francs.



"Liechtenstein in Figures", comprising extracts from the Statistical Yearbook, is popular with business authorities and private individuals as a way of drawing attention to Liechtenstein the world over. Like other statistical publications – apart from the Yearbook, for which a fee was recently introduced – the brochure is free of charge.

You will, unfortunately, not find this particular question answered. But you will find a wealth of data on regional differences in gender equality provided by the Gender Equality Index that is accessible – in Swedish and English – via Statistics Sweden's website: [www://scb.se](http://www.scb.se) (www.h.scb.se/scb/bor/scbboju/jam_hm_en/index.html).

In the early 1990s, Statistics Sweden developed a gender equality index for local authorities. The index was based on statistics on paid work, education, childcare, income and representation in municipal councils. The aim was to show how equal women and men are in these areas. The different factors were added up to produce an index and the local municipalities ranked by their index score. The results were presented in the form of maps.

Renewed demand

The annual updating of the index was interrupted in the mid-1990s due to a lack of resources. However, renewed demand for an updated version arose in spring 2000 after one of Sweden's largest regions (NUTS 3 level), Västra Götaland, stated its intention to establish itself as a leading region in terms of gender equality within the next decade.

To produce the index facts are needed about women and men both within the region and in other regions in Sweden as well as time series to follow develop-

Today, Swedish women and men can see – in black and white figures – whether gender equality in their home region is theory or practice.

Statistics Sweden has just revived its Gender Equality Index – a project begun in the early 90s – now equipped with modern GIS and Internet technology. **AGNETA THERMAENIUS** tells us more ...

Who's washing the dishes now?

Equal Opportunities signifies equal rights, responsibilities, and opportunities for women and men:

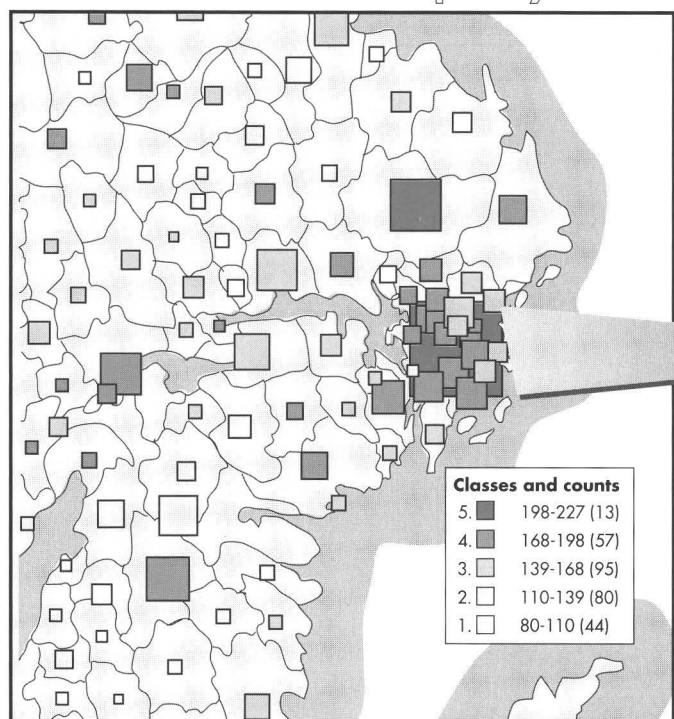
- ▶ to pursue a professional activity which provides economic independence;
- ▶ in the fields of childcare and housekeeping;
- ▶ to participate actively in politics, unions, and other societal activities.

ments. The Västra Götaland region, in association with other regions, commissioned Statistics Sweden last year to construct a prototype of a new Gender Equality Index which was tested by the clients and reviewed by Statistics Sweden. A first version was then presented early 2001 in the framework of the Swedish EU presidency.

Modern GIS technology on the Internet

The Gender Equality Index is designed to reach out to a broad range of users beyond the specialist cate-

SCB MAPS - Gender Equality Index



Source: Statistics Sweden. Reference: <http://www.scb.se/eng/-Databases-Maps>.

EqualX compares Sweden's 289 municipalities and counties in terms of gender equality. The Gender Equality Index consists of a weighted combination of about ten different variables. The results are shown in the form of maps and tables. The higher the score (dark bullets), the greater the equality between women and men.

The indicators are differently weighted and are represented by different shades of colour. Weight=0 indicates that this variable is meant to be background information and that it is not

relevant for the calculation of the index.

Clicking on a county or municipality on the map reveals the values for all the variables. The values for men are in blue, the values for women in red. (The corresponding colours in our print are shades of grey and red.) Bars and figures in grey indicate the average for all municipalities while green stands for the rank, or rather the score. Those municipalities with the best results in terms of gender equality attain the highest score.

Detailed results for Stockholm

Region	Stockholm	
Code	0180	
v1: Mean rank for Relative difference	216,10	
vA: Colour class	5	
	(mean)	Men Women (Rank)
(1) Proportion of people with post-secondary education		
	40.8	(21)
	43.8	(268)
(1) Proportion of people in gainful employment		
	72.6	(74.5)
	72.5	(288)
(0) Proportion of full time employment		
	90.1	(74.9)
	70.5	(--)
(1) Proportion of job seekers		
	10	(17.2)
	10	(286)
(1) Total income from gainful employment		
	230.9	(176.8)
	172	(204)
(-1) Days of parental leave benefit		
	30	(50)
	70	(14)
(-1) Days of temporary parental leave benefit		
	12	(50)
	88	(182)
(0) Proportion of children in municipal day care		
	83.2	(72)
	83.2	(--)
(-1) Sickness rates		
	34.4	(46.8)
	41.6	(280)
(1) Municipal council		
	51.5	(50)
	48.5	(265)
(1) Municipal executive board		
	53.8	(50)
	46.2	(259)
(1) Entrepreneurs with at least 9 employees		
	69.4	(50)
	30.6	(115)
(0) Mean age of people 20-64 years of age		
	39.9	(43.3)
	39.9	(--)

In Sweden's capital **Stockholm**, for instance, gender equality seems relatively high compared to other Swedish municipalities. It reaches the highest class (5) which indicates that it achieved high scores for the relevant indicators. For example, the proportions of women and men in gainful employment are almost the same which gives Stockholm a high score in terms of equality in this respect. The same applies to the proportion of women active in municipal councils which is also very close to that of men.

gory of "gender equality workers" and is therefore easy to understand both in terms of structure and language. For these reasons, the new product uses GIS (Geographical Information System) technology. The results are disseminated via the Internet.

The Gender Equality Index has three principal components:

- An index comparing the situation of women and

men in different parts of the country. It contains about ten variables at the municipal level (NUTS 5). Producing the equivalent index at county level (NUTS 3) is also possible. The index is presented both in map and table form.

- A section that enables the user to construct a personal gender equality index. The variables are the same as in the above

index, but the intention here is to enable the individual user to change the weighting (the weight can also be 0!) of the variables. In this section the level of the different variables (eg the level of income or the economic activity rate) can also be taken into account. This is a section we are going to develop more.

- A database of statistics. The statistics are taken from Sweden's Statistical Databases (SSD) or from other sources at Statistics Sweden or external sources such as the National Labour Market Administration, the National Council for Crime Prevention, the National Social Insurance Board, the National Board of Health and Welfare or the National Agency for Education. In the database the user can find individual variables and background information.

Most variables in the database are to be regarded as result variables, i.e. they show the gender equality position in the municipality or county for that particular variable. Examples include economic activity rates, total earned income and use of the parental insurance system. Some other variables in the database serve as explanatory variables, like, for instance, the average age of residents in the municipality or the industrial composition of the municipality.

There are links to other useful information on gender equality such as Statistics

Norway, which also has a Gender Equality Index.

Many European countries have shown substantial interest in the project. Statistics Sweden is interested in cooperating with other countries on extending the Gender Equality Index further to make it an international product. For further information, please contact via e-mail: **agneta.thermaenius@scb.se** ■

Standard variables included in the index (all by sex):

Proportion of people with post-secondary education

Proportion of people in gainful employment

Proportion employed in full-time work (0)

Proportion of job seekers

Total income from gainful employment

Days of parental leave benefit

Days of temporary parental leave benefit

Proportion of children in municipal day care (0)

Sickness rates

Municipal council

Municipal executive board

Entrepreneurs with at least 9 employees

Mean age of people 20-64 years of age (0)

Since October 2000 Germany's Federal Statistical Office has been breaking new ground in optimising how it organises its work processes. The motto of its process analysis is: out with central checks and controls and in with more individual responsibility and greater choice in the work units. **THOMAS KÖRNER** of the Federal Statistical Office describes the project that is part of the Office's 'quality offensive'.

Process analysis as a tool to optimise organisation

As for most national statistical offices in Europe, the Federal Statistical Office finds itself confronted with shrinking resources. Budgets must be cut, while simultaneously taking on additional new tasks.

In addition to the reports on current topics such as pension policy, employment or e-business, official statistics' users require other forms of statistical analyses. The EU's impact on statistical work continues to grow and is often linked to a burden of new tasks. The Internet calls for new methods of data collection and processing, while demands on data timeliness, accuracy and comparability are increasing. Lastly, the opportunities offered by information technology demand a critical approach to and change in work processes, with constant adjustments to structures and organisation.

Quality must improve, while simultaneously cutting costs and providing more capacity for new tasks. To achieve these objectives, from autumn

2000 the Statistical Office introduced a new instrument to optimise processes and organisational structures, i.e. process analysis.

Participation is the key

The basic principles of process analysis are decentralisation and staff participation: the process analyses are conducted in the departments, and the staff in question are involved consistently in all

phases of the process. Responsibility for results lies with the respective managers. In this way it is possible to set clear priorities for savings, to win capacity for new tasks and to adjust the staff structure in line with the new requirements.

In this, the process analysis instrument developed by the Statistical Office presents a number of advantages:

- ▶ There is no longer the impression that the organisational unit and the respective external controller are on opposite sides. It is easi-

er to establish open and constructive dialogue on measures to improve and develop the department.

- ▶ Staff are involved as widely as possible in the process analysis, thereby improving acceptance of the planned changes – an important precondition for their successful implementation.
- ▶ Managers play a more active role in planning organisational changes. They are responsible for facilitating debate and presenting convincing results.
- ▶ Apart just from savings, linking quality with cost will simultaneously make it possible to develop the department and its product mix by setting clear priorities.

Creativity and own initiative

These benefits emerge clearly, particularly in comparisons with traditional organisation analyses. While 'traditional' organisation surveys focus on pressure and control as instruments of change, process

A comparison

TRADITIONAL ORGANISATION ANALYSES

Staff profile:

- ▶ sluggish, will only work on detailed instructions to make improvements which do not directly affect his/her own workplace
- ▶ is not interested, not prepared to take responsibility

Pressure and control are the most important instruments of change

External survey committee

Confrontation between specialist departments and controllers/central departments;
Danger: mutual mistrust;
Inward-looking mentality

Problems in implementing the (externally ordered) measures

Analytical identification of staff needs

THE FSO'S PROCESS ANALYSES

Staff profile:

- ▶ creative and innovative
- ▶ highly interested in developing the overall organisation
- ▶ prepared to take and seek responsibility

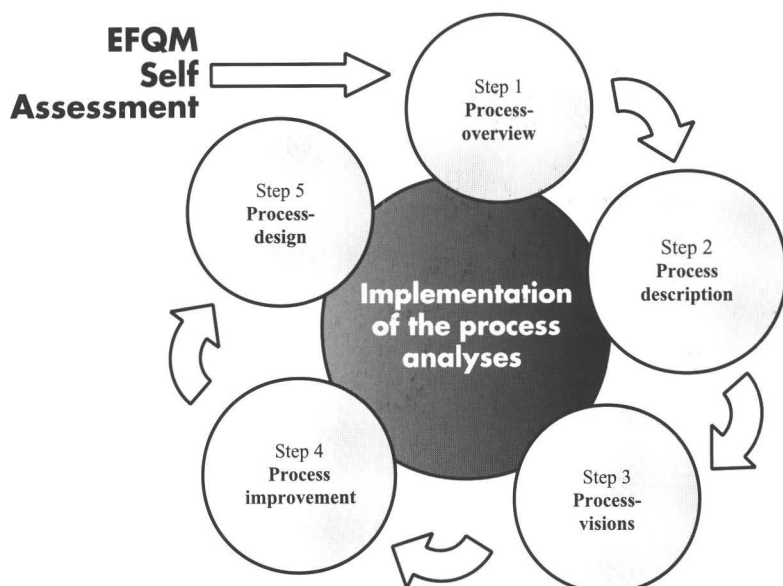
Motivation is by individual priority-setting and delegation of responsibility, serving as instruments of change

Ideas for improvement are developed by staff 'in situ'

Mutual support and trusting cooperation;
Danger: abuse of freedom given

Personal interest in implementing the proposals (one's own)

Methodological analysis of processes



analyses use staff creativity, own initiative and willingness to take responsibility. Staff decide independently 'in situ' where improvements should be sought, because they have not only the necessary knowledge, but also an interest in making their own work sphere fit for the future. Individual responsibility for implementing the process analyses is an important precondition for the committed and successful implementation of the proposals.

Uniform framework

Only a few framework conditions are laid down centrally, so as to ensure the uniform application of the process analyses in all departments. There are also formal rules to help keep the costs for documentation and process description as low as possible. These rules are restricted to the tools, with staff being free to decide the content. A help desk set up for the analyses deliberately provides only organisational support and methodological advice, but does not act as controller.

Every step of analysis is introduced by a workshop, in which staff become familiar with the method.

To minimise the workload, printed forms are prepared to present the results. A rough time frame is laid down, which each department can meet according to its own deadlines. There are also quality targets which each department sets itself and a rule on savings, which is binding. Again the situation here is that during the process analysis the department alone proposes how the stipulated savings should be made. Part of the saved resources should then remain in the department and be used for new tasks. In this way the process analyses also meet the condition of freeing resources for other important new tasks.

And this is how it works...

At the start of the process analysis the department conducts a self-assessment exercise according to the reference model of the European Foundation for Quality Management (EFQM model). At a workshop with a cross section of the department staff and managers, questions are asked according to the criteria of the EFQM model: "What does the quality profile of the department look like?" and "Where is the potential for improvement?"

The self-assessment should help to set the priorities for process improvements and also serves as a 'kick-off' event for the process analyses. Possible bias should be eliminated through joint self-assessment and conflicts defused through the search for a consensus. Lastly, the very fact of engaging in self-assessment will already provide an impetus for specific activities aimed at introducing improvements.

Once the result of the self-assessment is available, a start can be made on the actual process analysis.

1. First a rough **process overview** is prepared for the department. In a two-day workshop, a process map is prepared, presenting all the processes in context. On the basis of this map, the processes for closer examination are then selected. Criteria for selection can include high costs, the high strategic importance of the process and existing potential for improvement.
2. The analysis of the selected processes starts with the **process description**: the participants present the first phase of the process as a flow chart. Experience has shown that, here already, discrepancies can appear in the process organisation, such as interface problems.
3. Before a new process organisation can be designed in detail, there must first be an inspiration-gathering phase. The participating staff collect so-called "**process visions**" without regard for the problems of implementation.
4. Based on the process description and the

process visions, the fourth step is defining the **process improvement**, the new target process.

5. The last step in the process analysis is the **process design**, ie. the concrete planning for the implementation of the identified changes.

The process analyses are an ambitious project and consequently not without risks. Since the departments are given greater freedom of manoeuvre, success depends all the more on their commitment. Apathy or passive resistance to the process analyses would undermine their success. For example, unreasonable proposals, such as ceasing production of important statistics, could block the process of change. Also the implementation of the identified proposals must be monitored carefully. These risks can only be met by providing good information and training as well as through transparent decision-making.

Nevertheless, we were able to successfully carry out process analyses in two of the ten departments as planned in March 2001. Learning from this experience, certain methodological aspects are currently being improved – without introducing sweeping changes – before the other eight departments start their process analyses.

The process analyses are a pilot project for public authorities at national level in Germany. Despite the risks, they open up many opportunities to improve both work processes and to enhance statistical quality and client and staff satisfaction, thereby moving a step closer to the goal of a 'quality offensive'. ■

Following new statistics legislation, adopted last October, Maltese statistics has been having a wide-ranging revamp. **ROBERT MIZZI**, Information Officer at the Maltese Central Statistics Office, examines the nature and implications of the new law.

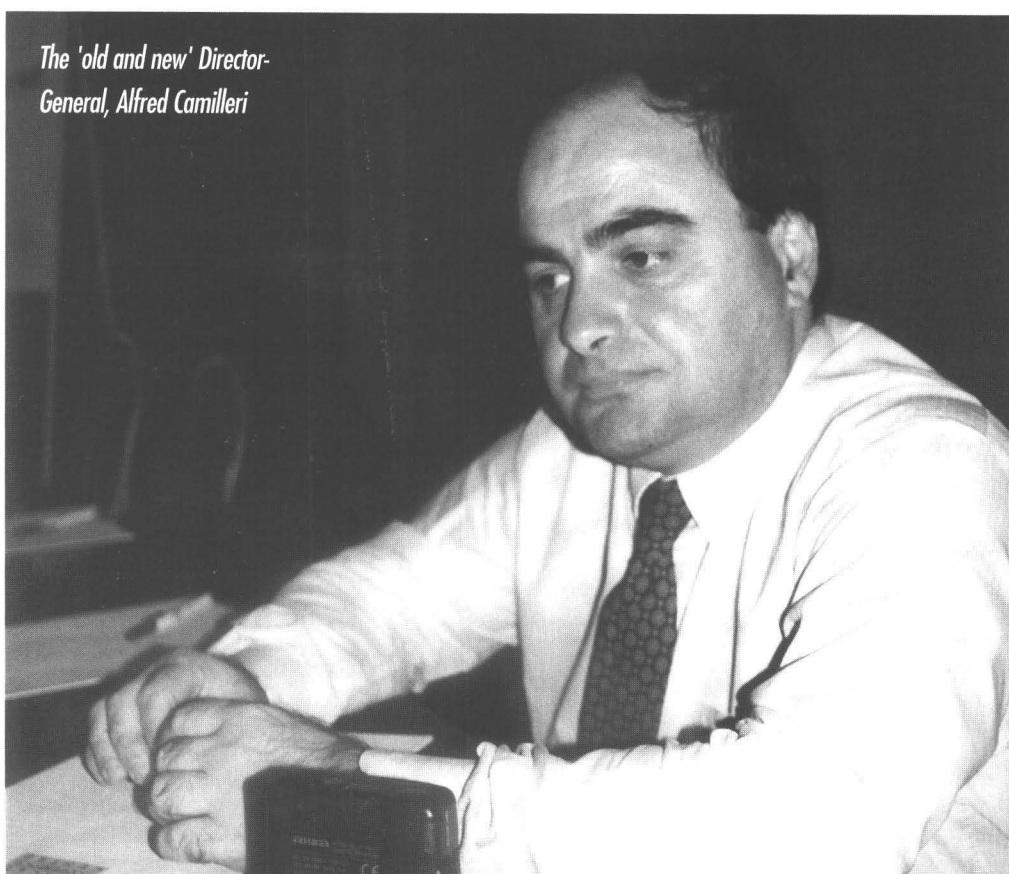
Maltese statistics gets far more than a facelift...

The Malta Statistics Authority Act, adopted in October 2000, came into force on 1 March 2001, repealing the Statistics Act of 1955. The new law "makes provision for the establishment of a body corporate to be known as the Authority of Statistics, for the regulation of the collection, compilation and publishing of official statistics".

The Statistics Authority Act is in line with Eurostat's fundamental principles of official statistics and European Council Regulation No. 322/97 of 1997. It provides for resource acquisition and emphasises coordination and cooperation between various entities in the collection and compilation of statistical data. Furthermore, it introduces radical changes, such as administrative fines, in dealing with non-response. Most significantly, the law endows the new structure with a distinct legal and functional identity.

The Malta Statistics Authority

The Authority is composed of a chairperson, the director-general who is an "ex officio" member, and six other members appointed by the Minister for Economic



The 'old and new' Director-General, Alfred Camilleri

Services including representatives of the Central Bank of Malta, the Malta Council for Economic Development, the University of Malta, and two other members as appointed by the Minister. According to article 5(c) all members "shall have the necessary technical competence in the domain of statistics".

Alfred Camilleri, who has headed the Office since 1995, has been appointed Director-General. The legal and judicial representation

of the Authority is vested in the Chairperson, Mr. Reno Camilleri.

The Authority acts as a supervisor over the Office of Statistics. The law defines this role by listing various and distinct functions in order to separate the powers between the Minister, the Authority and the Office. These include the regulation and supervision of the production of official statistics in accordance with international requirements. Further-

more, its role is to discuss and advise on statistical matters, including methodologies relating to the collection, compilation, and dissemination of statistics, and establish priorities in responding to the demand for official statistics.

It is interesting to note that the law also provides that, for the better of its functions, the "Authority may establish contact and forms of collaboration and understandings with other local and foreign

statutory bodies, government departments, international organisations, and other entities which exercise regulatory, supervisory or licensing powers under any law in Malta or abroad or which are otherwise engaged in gathering statistics, which could be directly or indirectly beneficial to the Authority." (Article 7(2) of the Act)

Indeed, this work had already started prior to the establishment of the Malta Statistics Authority. Under the new structure, it is expected that its development will be given added impetus.

The members of the Authority, other than the Director-General, will not have access to confidential information. Moreover, they cannot take instructions from entities or interest groups regarding the content, form and time of dissemination, selection of data sources, and application of statistical methods and procedures.

The National Statistics Office

The Director-General has been appointed for five years, renewable thereafter for a period of three years. He is responsible for the management and administration of the National Statistics Office. One of his most important duties is guarding the integrity and validity of official statistics and retaining public confidence in them. From the latter, stems the need to observe statistical confidentiality, since this is one of the fundamental principles relating to statistics.

The National Statistics Office is endowed with other various functions, all of which reflect the objectivity and neutrality of its structure. These include the collection, compilation, extraction and release of official statistics relating to the demographic, social, environmental and economic conditions and general activities. The Office is also responsible for providing the technical explanation of results in order to avoid misinterpretation and for monitoring and coordinating tasks with statistical implications imposed on other public bodies.

The law provides that the information has to be disseminated to all users, including government, institutions, social and economic operators, academic circles and the general public. Consequently, the availability of official statistics is not merely limited to serving the state and its institutions, but is meant to be a public good, serving all users. The production of statistical data is governed by the principles of reliability, objectivity, relevance, statistical confidentiality, transparency, specificity and proportionality.

The implications of the new law

A closer look at the Act's implications highlights the Authority's newly acquired judicial independence, meaning that it has divested itself of the limitations pertaining to a government department. It is now in a position to work much more flexibly vis-à-vis human

resources and financial management. This functional independence is also important for the domestic and international image of the National Statistics Office, given the significance and sensitivity of most of the data published.

The National Statistics Office is also striving to build a solid and concrete relationship of trust with data suppliers. In view of this, the Office attaches great importance to the confidentiality of data, in that individual information which has been collected for statistical purposes, is

- not published in an identifiable form, and
- not used for purposes other than statistical ones under any circumstances.

The issue of non-response also figures prominently with penalties for data suppliers failing to comply within the agreed deadlines. What is more, the Act provides for the Authority to impose administrative fines itself; this is an important and innovative development, since the 1955 Statistics Act contemplated only police action and court procedures. Of course, legal proceedings are still possible, if an employee of the Office contravenes any of his/her functions.

In addition, any public authority intending to carry out activities with statistical implications must consult, and coordinate with the National Statistics Office. This not only avoids duplication of data collection, but

will also enable the authorities concerned to compile and publish harmonised data both at national and international levels.

Finally, the Act lists a wide range of areas in which official statistics may be collected, processed and published. The requirements here are the strengthening and widening of programmes that form the system of basic statistics.

Making the system robust

Today, the National Statistics Office disseminates a considerable range of social and economic statistics by means of annual and ad hoc publications, press releases and an active website that is updated on a daily basis. To sustain this development, we will introduce reforms over the next two years, enabling the Office to apply a systematic approach eventually catering for everything required by the Act.

In the coming years, the rapid development in information technology will actively challenge the way in which the Office produces and disseminates statistical information to all users.

The new structure comprising the Malta Statistics Authority and the National Statistics Office will definitely be instrumental in providing the infrastructure to attain the Act's objectives, thus enabling the Office to supply essential information to all users in a timely and effective manner. ■

In May, Luigi Biggeri was appointed President of Istat. He succeeded professor Alberto Zuliani who had been president since 1993. His mandate will last for a renewable four-year term. As a result of his teaching activity and his functions in various statistical bodies, Luigi Biggeri is familiar with both the scientific, academic side of statistics and the practical, day-to-day business.

Born in Tuscany in 1939, Luigi Biggeri graduated in economics in 1963 at the University of Florence, where he started his career as a researcher in 1965 and where he has also been teaching in economic statistics as a professor since 1980.

Some more news on European statistical offices comes from Italy. Luigi Biggeri picks up the baton as President of the Italian statistical office from Alberto Zuliani.

Istat welcomes a new president

Academic laureate

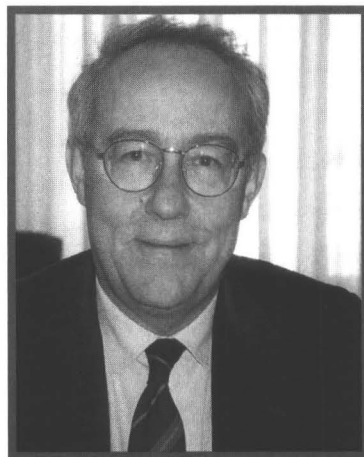
Luigi Biggeri is renowned as the author of more than 100 works in the statistical field. And, in fact, he was awarded the "Adolphe Quetelet" gold medal – named after the Belgian mathematician who is regarded as one of the fathers of modern statistics – in 1993 for his scientific activity. In 1994 he was nominated Fellow of the American Statistical Association.

From 1991 to 1993, he was Vice-President of the International Statistical Institute and also held the post as President of the Italian Society of Statistics (1996-2000), as President of the Italian Statistical Information Guarantee Commission (1996-1999) and he has been member of the Council of the Italian National Statistical Institute since 1996. Over the past 13 years he was actively involv-

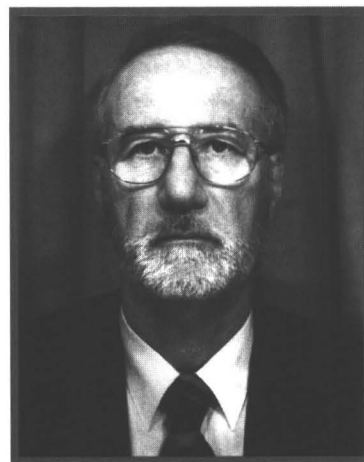
ed in setting up an agricultural census in China.

In parallel to his position as President of Istat, he retains his presidency of the European Centre for Cooperation in Statistics with Developing Countries.

After two terms of office as president of Istat, his predecessor Alberto Zuliani took over as head of the Authority for Information Technologies in Public Administration. ■



Navigating Italian statistics – Alberto Zuliani from 1993-2001 ...



... and his successor Luigi Biggeri

After 27 years at Eurostat, **DAVID HEATH** has retired from his post as Director of Agricultural, Environmental and Energy Statistics at the age of 65. He spoke to *Sigma* about his career, his feelings about the new developments in agriculture and his own interests in the area.

A Statistician with green fingers

Having started in agricultural statistics 27 years ago and now leaving as Director of this area, it can be said that for a man dedicated to agriculture David Heath has come full circle.

"Agriculture is a fascinating area and statistics have played a crucial role in the creation and implementation of the Common Agricultural Policy", he says. "It has been a real challenge to be able to meet the increasing demands for statistics on environmental concerns, rural development policy and enlargement adding new aspects to agriculture. The subject is also important in the world trade negotiations and consumers are more and more concerned with food safety. With the BSE crisis, listeria, etc., the consumer wants to be reassured about production methods. We should take into account all these new dimensions.

"Let me add that I consider agriculture as a mirror of society, a mirror of our world of contradictions. The crisis we go through is not least a crisis of a hyper-efficient world."

Despite his continuing affection for the agricultural area, his Eurostat career covered diverse fields: IT, foreign trade, technical cooperation



with developing countries and industrial statistics. In addition, as Director he was not only responsible for agricultural but also for environmental and energy statistics, both fascinating fields of great political importance.

If somebody asked for advice, what would it be?

"The most important thing for me is that you should always try to work in the best possible way within the given framework. You should do a bit more than the minimum requirement: be polite at all times and remember you get more back from helping others than from taking advan-

tage of them. You should have some convictions and values that you follow during your career including good human relations – this has been my recipe anyway.

"I never had the zeal to change the world. I could have chosen a career nearer to policy by taking a post in Brussels at the Directorate-General for Agriculture but my chosen area was statistics and I have been very happy in this humbler area, but an area where one sees direct practical results."

What problems do you see for the future?

"I see two major problems for future statistics: huge needs but not enough resources, and various difficult areas to tackle and measure such as environment, sustainability and rural development. In addition, reservations about statistics are widespread. Statistical surveys are felt as a burden or even as intruding into private life. It is the same for agriculture; there are many small farms about which we never obtain information. Yet new political issues, going beyond managing the markets for agriculture products, require information on these small farms.

"I am nevertheless proud of a new and promising project that we are just starting: a European survey on land cover and land use which will provide rapid statistical information on crops and also on environmental aspects."

And your retirement?

"I am certainly not hesitant about passing on the torch to somebody else. I will focus my time and energy in London where most of my family, including my two small grandchildren, live. I should be in Luxembourg some of the time to keep in contact and stay tuned to what is happening in Eurostat.

"I'm looking forward to getting my fingers green in the garden when the weather is good. Until now my neighbours, who are all retired, look at me with some pity when I'm working in the garden at the weekend in bad weather. At last, I will really have time to put my efforts to cultivating an "English" garden and make them green with envy!" ■

BELGIQUE/BELGIË
Jean De Lannoy Avenue du Roi 202/Koningslaan 202 B-1190 Bruxelles/Brussel Tél. (32-2) 538 43 08 Fax (32-2) 538 08 41 E-mail: jean.de.lannoy@infoboard.be URL: http://www.jean-de-lannoy.be
La librairie européenne/ De Europese Boekhandel Rue de la Loi 244/Wetstraat 244 B-1040 Bruxelles/Brussel Tél. (32-2) 295 26 39 Fax (32-2) 735 08 60 E-mail: mail@libeurop.be URL: http://www.libeurop.be
Moniteur belge/Belgisch Staatsblad Rue de Louvain 40-42/Leuvenseweg 40-42 B-1000 Bruxelles/Brussel Tél. (32-2) 552 22 11 Fax (32-2) 511 01 84 E-mail: eusales@just.fgov.be
DANMARK
J. H. Schultz Information A/S Herstedvang 12 DK-2620 Albertslund Tlf. (45) 43 63 23 00 Fax (45) 43 63 19 69 E-mail: schultz@schultz.dk URL: http://www.schultz.dk
DEUTSCHLAND
Bundesanzeiger Verlag GmbH Vertriebsabteilung Amsterdamer Straße 192 D-50735 Köln Tel. (49-221) 97 66 80 Fax (49-221) 97 66 82 78 E-Mail: vertrieb@bundesanzeiger.de URL: http://www.bundesanzeiger.de
ΕΛΛΑΔΑ/GREECE
G. C. Eleftheroudakis SA International Bookstore Panepistimiou 17 GR-10564 Athina Tel. (30-1) 331 41 80/1/2/3/4/5 Fax (30-1) 323 98 21 E-mail: elebooks@netor.gr URL: elebooks@hellasnet.gr
ESPAÑA
Boletín Oficial del Estado Trafalgar, 27 E-28071 Madrid Tel. (34) 915 38 21 11 (libros) 913 84 17 15 (suscripción) Fax (34) 915 38 21 21 (libros), 913 84 17 14 (suscripción) E-mail: clientes@com.boe.es URL: http://www.boe.es
Mundi Prensa Libros, SA Castelló, 37 E-28001 Madrid Tel. (34) 914 36 37 00 Fax (34) 915 75 39 98 E-mail: libreria@mundiprensa.es URL: http://www.mundiprensa.com
FRANCE
Journal officiel Service des publications des CE 26, rue Desaix F-75727 Paris Cedex 15 Tél. (33) 140 58 77 31 Fax (33) 140 58 77 00 E-mail: europublications@journal-officiel.gouv.fr E-mail: journal-officiel.gouv.fr
IRELAND
Alan Hanna's Bookshop 270 Lower Rathmines Road Dublin 6 Tel. (353-1) 496 73 98 Fax (353-1) 496 02 28 E-mail: hannas@iol.ie
ITALIA
Licosa SpA Via Duca di Calabria, 1/1 Casella postale 552 I-50125 Firenze Tel. (39) 055 64 83 1 Fax (39) 055 64 12 57 E-mail: licosa@licosa.com URL: http://www.licosa.com
LUXEMBOURG
Messageries du livre SARL 5, rue Raiffeisen L-2411 Luxembourg Tél. (352) 40 10 20 Fax (352) 49 06 61 E-mail: mail@mdl.lu URL: http://www.mdl.lu
NEDERLAND
SDU Servicecentrum Uitgevers Christoffel Plantijnstraat 2 Postbus 20014 2500 EA Den Haag Tel. (31-70) 378 98 80 Fax (31-70) 378 97 83 E-mail: sdu@sdu.nl URL: http://www.sdu.nl

ÖSTERREICH
Manz'sche Verlags- und Universitätsbuchhandlung GmbH Kohlmarkt 16 A-1014 Wien Tel. (43-1) 53 16 11 00 Fax (43-1) 53 16 11 67 E-Mail: manz@schwinge.at URL: http://www.manz.at
PORTUGAL
Distribuidora de Livros Bertrand Ld.ª Grupo Bertrand, SA Rua das Terras dos Vales, 4-A Apartado 60037 P-2700 Amadora Tel. (351) 214 95 87 87 Fax (351) 214 96 02 55 E-mail: dlb@ip.pt
Imprensa Nacional-Casa da Moeda, SA Sector de Publicações Oficiais Rua da Escola Politécnica, 135 P-1250-100 Lisboa Codex Tel. (351) 213 94 57 00 Fax (351) 213 94 57 50 E-mail: spoce@incm.pt URL: http://www.incм.pt
SUOMI/FINLAND
Akateeminen Kirjakauppa/ Akademiska Bokhandeln Keskuskatu 1/Centralgatan 1 PL/PB 128 FIN-00101 Helsinki/Helsingfors P./tfn (358-9) 121 44 18 F./fax (358-9) 121 44 35 Sähköposti: sps@akateeminen.com URL: http://www.akateeminen.com
SVERIGE
BTJ AB Traktorvägen 11-13 S-221 82 Lund Tlf. (46-46) 18 00 00 Fax (46-46) 30 79 47 E-post: btjeu-pub@btj.se URL: http://www.btj.se
UNITED KINGDOM
The Stationery Office Ltd Customer Services PO Box 29 Norwich NR3 1GN Tel. (44) 870 60 05-522 Fax (44) 870 60 05-533 E-mail: book.orders@theso.co.uk URL: http://www.itsofficial.net
ÍSLAND
Bokabud Larusar Blöndal Skólavörðustíg, 2 IS-101 Reykjavík Tel. (354) 552 55 40 Fax (354) 552 55 60 E-mail: bokabud@simnet.is
NORGE
Swets Blackwell AS Østenjoveien 18 Boks 6512 Etterstad N-0606 Oslo Tel. (47) 22 97 45 00 Fax (47) 22 97 45 45 E-mail: info@no.swetsblackwell.com
SCHWEIZ/SUISSE/SVIZZERA
Euro Info Center Schweiz c/o OSEC Stampfenbachstraße 85 PF 492 CH-8035 Zürich Tel. (41-1) 365 53 15 Fax (41-1) 365 54 11 E-mail: eics@osec.ch URL: http://www.osec.ch/eics
BÄLGARIJA
Euopress Euromedia Ltd 59, blvd Vitosha BG-1000 Sofia Tel. (359-2) 980 37 66 Fax (359-2) 980 42 30 E-mail: Milena@mbox.cit.bg URL: http://www.euopress.bg
ČESKÁ REPUBLIKA
ÚVIS odd. Publikaci Havelskova 22 CZ-130 00 Praha 3 Tel. (420-2) 22 72 07 34 Fax (420-2) 22 71 57 38 URL: http://www.uvis.cz
CYPRUS
Cyprus Chamber of Commerce and Industry PO Box 21455 CY-1509 Nicosia Tel. (357-2) 88 97 52 Fax (357-2) 66 10 44 E-mail: demetrap@ccci.org.cy

EESTI
Eesti Kaubandus-Tööstuskoda (Estonian Chamber of Commerce and Industry) Toom-Kooli 17 EE-10130 Tallinn Tel. (372) 646 02 44 Fax (372) 646 02 45 E-mail: einfo@koda.ee URL: http://www.koda.ee
HRVATSKA
Mediatrade Ltd Pavla Hatza 1 HR-10000 Zagreb Tel. (385-1) 481 94 11 Fax (385-1) 481 94 11
MAGYARORSZÁG
Euro Info Service Szt. István krt.12 II emelet 1/A PO Box 1039 H-1137 Budapest Tel. (36-1) 329 21 70 Fax (36-1) 349 20 53 E-mail: euroinfo@euroinfo.hu URL: http://www.euroinfo.hu
MALTA
Miller Distributors Ltd Malta International Airport PO Box 25 Luqa LQA 05 Tel. (356) 66 44 88 Fax (356) 67 67 99 E-mail: gwirth@usa.net
POLSKA
Ars Polona Krakowskie Przedmiescie 7 Skr. pocztowa 1001 PL-00-950 Warszawa Tel. (48-22) 826 12 01 Fax (48-22) 826 62 40 E-mail: books119@arspolona.com.pl
ROMÂNIA
Euromedia Str. Dionisie Lupu nr. 65, sector 1 RO-70184 Bucuresti Tel. (40-1) 315 44 03 Fax (40-1) 312 96 46 E-mail: euromedia@mailcity.com
SLOVAKIA
Centrum VTI SR Nám. Slobody, 19 SK-81223 Bratislava Tel. (421-7) 54 41 83 64 Fax (421-7) 54 41 83 64 E-mail: europ@ttb1.sltk.stuba.sk URL: http://www.sltk.stuba.sk
SLOVENIJA
Gospodarski Vestnik Dunajska cesta 5 SLO-1000 Ljubljana Tel. (386) 613 09 16 40 Fax (386) 613 09 16 45 E-mail: europ@gvestnik.si URL: http://www.gvestnik.si
TÜRKIYE
Dünya Infotel AS 100, Yil Mahallesi 34440 TR-80050 Bagcilar-Istanbul Tel. (90-212) 629 46 89 Fax (90-212) 629 46 27 E-mail: infotel@dunya-gazete.com.tr
ARGENTINA
World Publications SA Av. Cordoba 1877 C1120 AAA Buenos Aires Tel. (54-11) 48 15 81 56 Fax (54-11) 48 15 81 56 E-mail: wpbooks@infovia.com.ar URL: http://www.wpbooks.com.ar
AUSTRALIA
Hunter Publications PO Box 404 Abbotsford, Victoria 3067 Tel. (61-3) 94 17 53 61 Fax (61-3) 94 19 71 54 E-mail: jpdavies@ozemail.com.au
BRESIL
Livraria Camões Rua Bittencourt da Silva, 12 C CEP 20043-900 Rio de Janeiro Tel. (55-21) 262 47 76 Fax (55-21) 262 47 76 E-mail: livraria.camoes@incm.com.br URL: http://www.incм.com.br
CANADA
Les éditions La Liberté Inc. 3020, chemin Sainte-Foy Sainte-Foy, Québec G1X 3V6 Tel. (1-418) 658 37 63 Fax (1-800) 567 54 49 E-mail: liberte@mediom.qc.ca

Renouf Publishing Co. Ltd 5369 Chemin Canotek Road, Unit 1 Ottawa, Ontario K1J 9J3 Tel. (1-613) 745 26 65 Fax (1-613) 745 76 60 E-mail: order.dept@renoufbooks.com URL: http://www.renoufbooks.com
EGYPT
The Middle East Observer 41 Sherif Street Cairo Tel. (20-2) 392 69 19 Fax (20-2) 393 97 32 E-mail: inquiry@meobserver.com URL: http://www.meobserver.com.eg
INDIA
EBIC India 3rd Floor, Y. B. Chavan Centre Gen. J. Bhosale Marg. Mumbai 400 021 Tel. (91-22) 282 60 64 Fax (91-22) 285 45 64 E-mail: ebicindia@vsnl.com URL: http://www.ebicindia.com
JAPAN
PSI-Japan Asahi Sanbancho Plaza #206 7-1 Sanbancho, Chiyoda-ku Tokyo 102 Tel. (81-3) 32 34 69 21 Fax (81-3) 32 34 69 15 E-mail: books@psi-japan.co.jp URL: http://www.psi-japan.co.jp
MALAYSIA
EBIC Malaysia Suite 45.02, Level 45 Plaza MBf (Letter Box 45) 8 Jalan Yap Kwan Seng 50450 Kuala Lumpur Tel. (60-3) 21 62 92 98 Fax (60-3) 21 62 61 98 E-mail: ebic@tm.net.my
MÉXICO
Mundi Prensa México, SA de CV Río Pánuco, 141 Colonia Cuauhtémoc MX-06500 México, DF Tel. (52-5) 533 56 58 Fax (52-5) 514 67 99 E-mail: 101545.2361@compuserve.com
PHILIPPINES
EBIC Philippines 19th Floor, PS Bank Tower Sen. Gil J. Puyat Ave. cor. Tindalo St. Makati City Metro Manila Tel. (63-2) 759 66 80 Fax (63-2) 759 66 90 E-mail: eccpcom@globe.com.ph URL: http://www.eccp.com
SOUTH AFRICA
Eurochamber of Commerce in South Africa PO Box 781738 2146 Sandton Tel. (27-11) 884 39 52 Fax (27-11) 883 55 73 E-mail: info@eurochamber.co.za
SOUTH KOREA
The European Union Chamber of Commerce in Korea 5th Fl, The Shilla Hotel 202, Jangchung-dong 2 Ga, Chung-ku Seoul 100-392 Tel. (82-2) 22 53-5631/4 Fax (82-2) 22 53-5635/6 E-mail: eucck@eucck.org URL: http://www.eucck.org
SRI LANKA
EBIC Sri Lanka Trans Asia Hotel 115 Sir Chittampalam A. Gardiner Mawatha Colombo 2 Tel. (94-1) 074 71 50 78 Fax (94-1) 44 87 79 E-mail: ebicsl@slnet.lk
UNITED STATES OF AMERICA
Bernan Associates 4611-F Assembly Drive Lanham MD 20706-4391 Tel. (1-800) 274 44 47 (toll free telephone) Fax (1-800) 865 34 50 (toll free fax) E-mail: query@bernan.com URL: http://www.bernan.com
ANDERE LÄNDER/OTHER COUNTRIES/ AUTRES PAYS
Bitte wenden Sie sich an ein Büro Ihrer Wahl/Please contact the sales office of your choice/Veuillez vous adresser au bureau de vente de votre choix Office for Official Publications of the European Communities 2, rue Mercier L-2985 Luxembourg Tel. (352) 29 29-42455 Fax (352) 29 29-42758 E-mail: info-info-opoce@cec.eu.int URL: http://eur-op.eu.int

Get the latest official European statistics daily

www.europa.eu.int/comm/eurostat/

With a single click, connect to Eurostat, the official source for harmonised and comparable statistics at European level including the euro-zone.



Eurostat site

The most comprehensive statistical information
source: www.europa.eu.int/comm/eurostat/

Whether you need statistics to discover Europe, make business decisions or conduct research, this site provides a wide range of free statistics covering the economy, finance, society, agriculture and the environment.

The site presents everything Eurostat offers and gives you daily updates on key indicators, publications, news releases as well as other products and services.



Euro-Indicators site

To stay on top of short-term economic analysis:
www.europa.eu.int/comm/euroindicators/

With the Euro-Indicators site, you can access short-term statistics by statistical subject: consumer prices, national accounts, external trade, industry, commerce and services, labour market, monetary and financial indicators as well as balance of payments. Data are also available for individual countries.

Follow the guidance on the above-mentioned Internet address and subscribe to get your full access to the Euro-Indicators database (annual subscription fee). You may also ask for customised database extractions or order related publications on-line (paying services).

REGISTER

today and benefit from our free services.



OFFICE FOR OFFICIAL PUBLICATIONS
OF THE EUROPEAN COMMUNITIES

L-2985 Luxembourg



Stay linked to statistics on the move!